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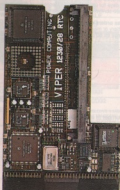
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EDITORIAL



Another new year has crept up on us, and the warning bells are sounding. 1994 was a year of great upheaval in the Amiga world. In the spring Commodore announced another year of disastrous losses, but few would have guessed that it would go into liquidation. After all, it had just launched three new products the previous year, products that brought the Amiga a completely new chipset and new graphics capabilities. And their losses were much smaller (if hundreds of millions of pounds can be termed small) than those of the previous year. But it proved to be the straw that broke the camel's back. Not that we, the Amiga users and buyers of the UK, or the rest of Europe were to blame - we loyally purchased the machines, and the software, and the expansions. Just before they went down a new CD-ROM drive was announced, and even though it never reached our shores it did herald the launch of two third party CD-ROM drives which have sold very well. In fact 1994 was the year when CD-ROM and Comms took off in a big way and this coming year is sure to reflect this.

So what of 1995? Will the next year see a phoenix-like rise from the ashes of a Maidenhead Amiga International, or will the rights to the machine go to the States? Or will nothing happen, like it hasn't been happening for the last six months? Will software continue to be released at the rate it has been in the last few months if this situation isn't resolved? Can the Amiga actually be rescued after all this time? I hope so. And if the mood of the exhibitors and visitors to the World Of Amiga is anything to go by, there's still life in the old chips yet. The show ain't over 'till David Pleasance sings!

P r o d u c t i v i t y

It's all gone graphic this month! For a start we've got a full review of Almathera's stunning Photogenics. See how it shapes up against Image FX 2 and Personal Paint 6.1. Not only that, but we also take a look at the brand new version of Directory Opus, and review Termite and Gamesmith.

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Photogenics88

High-spec, low cost professional 24 bit graphics on your Amiga. Who needs a graphics workstation now?

Personal Paint 6.191

Up to version 6.1 already? Blimey time flies etc ...!



Image FX 294

Can the established champ beat off this month's challengers? We find out.

Termite98

Sounds a bit creepy crawly, but in fact it's a brand new bit of Comms software.

Cover Feature: Make your Amiga faster!

You don't necessarily need a 60MHz accelerator to make your Amiga faster - with the right bits of software in your system, you can drastically improve the productivity of your Amiga. Whether it's using a tool like this month's brilliant cover-mounted *Directory Opus*, or simply installing a tiny PD utility, you'll be amazed at how you can improve your Amiga for so little cost!

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Play the Complete Best level in our demo of this fantastic RPG from Black Legend

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AMIGA

Coverdisks

Disk 100 Page 9

Wow! Directory Opus 4 is on our 100th coverdisk in all its fully-featured splendour. Turn to page 9 to find out more...

Disk 101 Page 10

Crystal Dragon is our game disk this month, and it's a corker! Hack and slash your way through this wonderful RPG. More on page 10...

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AMIGA

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- **Directory Opus 4** complete package

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If you thought we've been pretty good so far, you won't believe what we got lined up for you in the next few months! Stuff so hot, we dare not mention it here!

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1. Send your letters etc to the right department and please do not send a stamped self-addressed envelope.
2. Please remember that we have to write and produce your favourite magazine every month, so try to keep your correspondence short and to the point. Although we'd love to, we simply cannot reply personally to the hundreds of calls, letters, and faxes we get. Answers have to be through the pages of the magazine only.

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CU AMIGA runs massive competitions almost every issue. To enter one of these simply put your name and address on the back of postcard, along with the answers and send them to us at the usual address. Competition entries are only accepted by post. One entry per person please and the editor's decision is final. Winners will be notified by post. Other rules may be printed from time to time.

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COMMS

You can contact Andy Leaning, via the Internet/Email CUAMIGA@vic.compuelk.co.uk. Please keep email brief and to the point.

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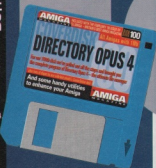
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the world"

John Kennedy, CU AMIGA Magazine, Sept. 1994

"WOW!"

Andy Leeming, Technical Editor, today.



DISK Coverdisks

It's our 100th coverdisk this month, so in a celebration we've got something extra special. Every other magazine wanted it, but we've got it: **Directory Opus 4** - the undisputed **TOP** utility for your Amiga - makes your Amiga easier to use and faster!



When it was launched last year *Directory Opus 4* stormed the Amiga world, won every award going, and quickly became the accepted standard for utility programs. Copied many times since, no one has yet matched its simplicity, speed and elegance.

Since then every Amiga magazine has been after it, but GP Software, rightly concerned about the reputation of their best selling program, chose *CU Amiga Magazine* as their partner for cover-mounting. Now it's yours with our 100th coverdisk.

For those of you new to the Amiga, *Directory Opus* provides a simple, but elegant, user interface that makes your Amiga easier and faster to use. Here are just some of the features on offer:

What it does:

- Cuts out constant disk changes
- Makes file maintenance (copying, deleting, renaming) much easier
- Cuts out complex SHELL commands
- Makes your Amiga faster
- Simple point and click buttons greatly ease otherwise difficult disk operations
- Works how you want it to work - fully configurable
- Plus much, much more!

And, building on the power of *Directory Opus* our lead feature this month shows you how to improve and make your Amiga faster. In a huge, hint-packed tutorial our Amiga gurus reveal how using this program, and several others (many of which are also on the disk) you can make your Amiga easier, more fun and faster.

For full details on how you can easily install *Directory Opus*, turn to page 12. To make your Amiga faster, easier and more enjoyable flick your way to page 23 where our cover feature breaks down some low cost ways to boost your Amiga.

And there's more!

This time we've gone even further than we normally do (and that's going some!). In addition to the stunning *Directory Opus* you'll also find two smaller utilities on the disk. These are fully covered in our lead feature this month, -these improve font loading speed and let you keep an eye on the time, you'll find them in the "UTILITIES" drawer on coverdisk 100.

And it doesn't end there. You'll find lots of extra clipart for *ComicSetter* - last month's cartoon creation coverdisk. This clipart can be loaded directly from disk and can be combined with that supplied last month to boost your collection, and we'll be supplying further clipart on our coverdisk over the next few months to expand your collection even further! ■

READER OFFER



The version of *Directory Opus* on our coverdisk is version 4, complete with on-line help, and is fully configurable. This is the full version and is not limited or cut down in any way.

If you like this version, you'll love the brand new Version 5, which will be released in late January '95. You can find an exclusive preview of it on page 86 of

this issue. Its many features include:

- Fully multi-tasking, all requesters work independently
- Completely rewritten and enhanced user interface
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DISK 101

Crystal Dragon

This month's coverdisk number 101 has the complete first level of **Crystal Dragon** - the latest RPG from **Black Legend**.



If you liked *Solar 3* and *Dungeon Master* then you'll love *Crystal Dragon*. Its programmers Magnetic Fields, have rounded up all the ingredients of a good RPG, and rolled them into one for *Crystal Dragon*. The gameplay is simple. An evil sorcerer, Ariath, has entombed a magic crystal in a bid to gain control over its magical power and use it to rule the universe. Your job is to get to the crystal before he has a chance to do so. But you're not alone in your quest. You can pick two other people to help you battle against the sorcerer's guards and journey around the maze-like tower.

Coverdisk 101 supplies all you need to get around the first level of this huge game. The whole complement of characters, from warriors to magicians, are there for you to choose from. Once you've picked your team you're off into the maze-like world of *Crystal Dragon*, where you have to move around the labyrinth of corridors picking up useful items such as apples, spells, and fire wands along the way. Did I say spells? Let me explain. If you pick a character with mystical ability (you can find out whether they have magic power in the selection screen) then there is a wide selection of spells to choose from in the game. These could light up a dark room, open a locked door, or simply help you in the fight against the many guards that block your path.

Loading the disk is simple. Full instructions are on page 13. Once loaded, you've got to solve a quick puzzle before you get into the game, but once you're in it's all very straightforward. There is a main viewing window in the centre. The players are below the window and their inventory is on the left. The spell book is top-right and an expanding map icon is below it. Click on the map icon and you can find out exactly where you are and where the main doors are. There are bars beside each player denoting how hungry, thirsty or experienced they are. Experience levels help in battle, the more experienced a player is the stronger he is. Also helpful is the fact that you can move one player in front of the other, so keep the most experienced one in front when entering into combat with a guard. Keep an eye on the hunger and thirst icons though, because you don't want them to die of thirst - keep them topped up with food such as apples, or rats (yeuch) and keep thirst at bay by making them drink from the water fountains dotted around the game. ■



It's a giveaway!



**Win a copy of
Crystal Dragon and
Football Glory.**

Not only have we lined up this fantastic coverdisk, we've also got ten copies of *Crystal Dragon* and that fabulous Black Legend football game - *Football Glory* - to give away. Write the correct answers to the following questions on the back of a postcard, send it to the address below, and a copy of *Crystal Dragon* and *Football Glory* could be yours!

1. What is the name of the evil sorcerer in *Crystal Dragon*?
2. What rodent can form part of a staple diet in *Crystal Dragon*?
3. What English Saint is best known for slaying a dragon?

**Answers on a postcard to Crystal Glory Competition,
CU Amiga Magazine, Priory Court, 30-32 Farrington
Lane, London EC1R 3AU.**

No employees of EMAP Images or Black Legend may enter. The editor's decision is final. All entries must be in by 19/2/94.
Only one entry per person.

EUROPEAN Challenge

KICK OFF 3

WHAT THE EXPERTS SAY:



"Pure footie action...with some of the smoothest scrolling seen on the PC" **Jeremy Wells, PC ZONE**



"Looks good...plays good" **James Binns, PC FORMAT**

"At last a soccer game with real depth for Amiga and PC players" **Paul Smith, MATCH MAGAZINE**



"The most complete football game ever" **Mark Patterson, C&VG**



"Fast pace, action and control with a huge amount of gameplay" **John Bennett, PC REVIEW**

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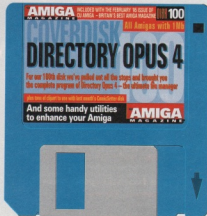
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© 1994 Anco Games. Anco Software Ltd. 3 Millbrook Industrial Estate, Levens Road, Bursford, West Dorset, Dorset. Tel: 01222 292513 Fax: 01222 292422. Amiga: Min 1 Mb, 1 button, 2 button and 4 button joystick compatible. IBM PC: Min 386/25, 1024 VGA 2 button or 4 button joystick compatible. Soundblaster compatible. * Screen shots displayed are representative of IBM PC and Amiga 1200 screens only.

How to load your coverdisks



IF YOUR DISK WON'T LOAD

If your coverdisk doesn't seem to work as it should, then follow this simple guide. Firstly, remove all unnecessary peripherals, such as printers, modems etc. Sometimes trappings memory expansions will interfere too. Follow the instructions on these pages to the letter, and it, after that, you find that the disk still doesn't work, call the Diskpress helpline on: 0451 816 788 between the hours of 10am and 5pm from Monday to Friday.

If they advise you that the disk is faulty, fill in your details in the form below, and send this form, along with the disk and a 20p stamped self addressed envelope to the following address:

CU AMIGA DISK RETURNS, DISKPRESS,
UNIT 7, WILLOW COURT, BOURTON INDUSTRIAL
PARK, BOURTON-ON-THE-WATER, GLOUCESTER-
SHIRE GL54 2HG.

NAME _____

ADDRESS _____

TYPE OF AMIGA OWNED _____

DISK NUMBER _____

DESCRIBE EXACTLY WHAT HAPPENS WHEN YOU

TRY TO LOAD THE DISK _____

HOW TO LOAD COVERDISKS

WRITE PROTECT YOUR COVERDISK!

With it being our 100th cover disk we wanted to give you something a bit special, and you can't get much better than *Directory Opus V4*. Along with this stunning program you'll also find extra clipart for last month's *ComicSetter* disk, and several amazing little utilities to enhance your Amiga.

Loading DIR OPUS 4

Follow these instructions to use *Directory Opus*, but before you do, ensure that you have a blank disk handy. It doesn't need to be formatted (the installer we've supplied will take care of that for you) but it must not contain anything you need, otherwise it will be overwritten.

1. Insert disk 100 in your Amiga and turn it on.
2. Double click with the mouse on the CU #100 icon.
3. Double click on the DOPUS icon in the disk window.
4. Shortly your Amiga will ask you to insert a disk in DF0: Replace the coverdisk with your first blank disk. Please note that this blank disk must have the notch in the top right-hand corner closed, ie write enabled.
5. Press the Return key.
6. When asked, replace the coverdisk.

Now replace the cover disk with your spare disk and restart the Amiga. *Directory Opus* will now load, for instructions on using this program turn to page 23.

Clipart

Firstly make a back-up of your coverdisk. If you are unsure how to do this consult your owners manual. The clipart supplied on this disk can be used without having to do anything else before hand. To use it simply load *ComicSetter* from last month, and then when you wish to load clipart, insert the coverdisk and go into the drawer called Clipart. You'll now be able to load the supplied clips directly.

Loading the Utilities

The other utilities referred to over these pages can be found on the decompressed *Directory Opus* disk - in a drawer called 'Utilities'.

Follow the instructions for loading disk 100 and then turn to the lead feature for what they're about and more details on how to use them.

Loading Crystal Dragon

It could hardly be easier. Put the disk in the internal drive and re-boot the Amiga. When the Workbench screen loads up, double click the *Crystal Dragon* disk icon, then double click the *Crystal Dragon* game icon. The game will now load. 1.3 A500 users will have to put the disk in the internal drive, re-boot, and enter the following line of text:

crystal_dragon

Then press the Return key. To get the symbol, hold down the shift key and press the minus symbol

key. The game will now load automatically. Refer to page 10 for game-play instructions.

DISK VIRUS!

Here at CU Amiga Magazine we go to a lot of trouble to ensure that our coverdisks are completely free of Viruses. Even disk undergoes stringent checks and procedures with the latest virus software. However, we cannot accept any responsibility for possible damage incurred by viruses or faulty disks which have escaped our attention.

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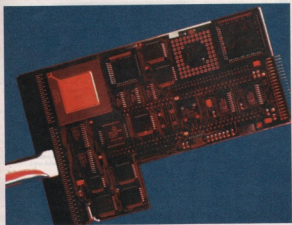
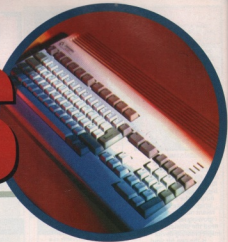
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News

Super Accelerators



The world's fastest Amiga accelerator has been announced by Phase 5 Digital Products - developers of the Blizzard range of Amiga accelerators. The new CyberStorm A4000 card features a Motorola 68060 running at 50MHz, which when fitted to an A4000 should deliver an amazing 89.19 MIPS - this compares to a normal A4000/40 speed of just 15.44MIPS. The card can also take 68060s with clock speeds of up to 80MHz, potentially delivering a staggering 130 MIPS.

The CyberStorm board also has expansion capabilities allowing a Fast SCSI-II controller to be added, along with an Ethernet Controller (for networking) and a high speed serial port. The CyberStorm card

should be available in February '95. Prices are expected to be around £1,000.

At the same time as announcing their A4000 accelerator, Phase 5 also announced a new version of the Blizzard A1230 accelerator - currently the fastest A1200 accelerator seen by *CU Amiga Magazine*. The new model - the A1230-III - offers similar specification to the existing 50MHz 68030 model, but is £70 cheaper at just £229.95, the same price as the current 40MHz A1230-II. A new 40MHz 68EC030 version of the A1230-II was also announced, this to be priced at just £189.95.

Phase 5 Digital Products are also developing a 64-bit graphics card. Called the CyberVision 64, this will work on Zorro III Amigas (the A3000 and A4000) and comes complete with 2Mb of video RAM and a 64-bit graphics engine. Like the 50MHz CyberStorm card it should be on sale in early '95, with a price of £299.95. Gordon Harwood Computers, the UK distributors, are on 01773 836781. ■

Retailers Back The Amiga



Good news for all Amiga fans. The retailers want the Amiga back in the shops and on the shelves. A poll carried out by Computer Trade Weekly across the spectrum of independents and chain store managers revealed that 62% would like to see the Amiga back in full stock. And it could be happening sooner than you think because *CU Amiga Magazine* spoke to Commodore's David Pleasance at Last December World of Amiga show, and he was confident that the management buyout was going ahead, as their competitor CEI have dropped out of negotiations. Mr Pleasance said: "There were will be A1200s back in stores by the very latest April 1995". And at the time of writing there plans for a new machine; a hybrid of the A1200 and the A4000. So good tidings indeed for 1995. ■



New Genlock

Learning Amiga dealer Silica has released a new genlock. Manufactured by Amitek, the Fusion genlock is a composite video genlock aimed mainly at home users. With it the Amiga can add titles, captions and animations to video from a VCR.

The genlock supports three modes of operation: original video picture only, the video picture with overlaid Amiga graphics or purely Amiga graphics. The hardware also includes a fader to allow gradual fading between pictures.

The popular home titling software package Scala HT-100 is also supplied with the genlock. The Fusion genlock has a price of £399 and is available from Silica on 0181-309 1111. ■



Ocean Backs Some Winners

Who said the Amiga market is dying? Ocean have just announced that their new releases: *Jungle Strike* and *PGA European Tour* both shipped over 20,000 units into the UK on the first day of sale. Check out page 67 of this issue for an in-depth review of *PGA European Tour*.

Flushed by the outstanding success of this, Ocean have lined up a whole new batch of releases for the new year. More news in the new year. Ocean are on 061 832 6633. ■



Pinball Mania

Following the massive success of the pinball games, 21st Century Entertainment have plans in the pipeline for yet another pinball game. Their recently updated *Pinball Illusions* runs only on A1200 machines and above, so 21st century have decided to go back to the drawing board and create a game for the A500 and A600 which incorporates all the best features of the pinball game.

At the time of writing there are no concrete game plans drawn up but the game looks like it will be called *Pinball Mania* and we should be hearing more very soon.

Contact 21st century on 02355 851852 for more information. ■

Pirate BBS Closed

A bulletin board distributing pirated Amiga software has had its equipment confiscated and the operator fined £500. The board operator, Robert Butler, pleaded guilty to two specimen charges of distributing copyright software.

Using a computer and a modem, users of the BBS could download copies of commercial software in return for uploading games to the BBS. The trade body ELSPA, in conjunction with West Midlands police, was responsible for the legal action which saw the operator fined and his equipment confiscated.

John Loader, chief investigator of the ELSPA crime unit said: "The cost of leisure software piracy is £778.5 million in the UK alone. Obviously this degree of loss cannot continue unchecked which is why ELSPA has been so active in pursuing software pirates and bringing them to justice."

CU Amiga Magazine reminds all our readers that copying commercial software is illegal and it not only harms software houses but the future of the Amiga. ■

Oops!

A mistake crept into our review of *Easy Ledger* last month. When we said it was priced £29.99 what we actually meant was £199.99. The increase in price does not affect our rating of the program, and it is still worthy of the 88% we awarded it. *Easy Ledger* is available from Wizard Developments, 0322 273908. ■

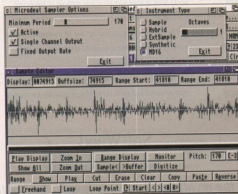
GVP Continue

Contrary to news spreading on bulletin boards Great Valley Products, (GVP), have not gone bankrupt. The giant American Amiga peripheral manufacturer is still trading and will continue to support its products.

In early December several news stories appeared on BBS systems saying that they had gone into liquidation. These stories quickly spread, and by the time of the World of Commodore Show, rumour had got that the manufacturer had gone bankrupt and owed millions of dollars. But a quick call to them quickly put the story to rest. Their phone lines answered as normal, their technical support staff were on hand and their marketing manager dismissed the rumours. In fact, far from being bankrupt they are working on new products and hope to announce new accelerators later in the year. More news as we have it. ■

Aura Compatible OctaMED

Last issue we reviewed HiSoft's 12-bit PCM/ACIA sound sampler Aura, awarding it a mark of 78%. The main criticism of the hardware and software combination was the lack of compatibility with existing Amiga sequencer software. However, RBF Software are about to release an update to *OctaMED V5* which allows A1200 users to play back 12-bit samples through the Aura cartridge, in exchange for one of the standard Amiga sound channels. *OctaMED 5.04* has passed beta testing, and should be available by the time you read this. The beta version we've used allows 12-bit sample playback rates of 21KHz and above on a standard A1200, whilst keeping another three tracks of Amiga samples all playing in time. Note that the Aura support is the only difference in V5.04 over V5.0. Many new features will be available in the forthcoming *OctaMED V6.0*, due out by Spring 1995. ■

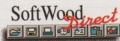


SoftWood Software will go down in history, the best there's been... for ages.

The way we all communicate today has evolved through centuries of development and change. Prehistoric man set the ball rolling when he used cave pictures as a means of describing his hunting conquests. Probably the most famous of all 'picture writing' techniques was that used by the Egyptians. Known as Hieroglyphics, which means 'sacred carved inscription', this ancient form of information technology quickly spread to all parts of the Mediterranean region. Gradually pictures were rationalised and both numbers and letters were eventually formed. The Greeks were the first to use these letters in a way that is familiar to us all, and they in turn passed this knowledge on to the Romans. It was then that an alphabet was formed using only capital letters; the basis of most of today's languages. Inscriptions in stone, often filled with lead or bronze, eventually gave way to clay tablets, papyrus and ultimately parchment (treated animal skins). By AD 100 parchment and papyrus books were being created. Another 600 years passed before books began using capitals for headings and small letters, known as 'half unicals', for the main body of text. Although still made by hand, pages were easier to produce and became far more legible in the process. It was the mid 15th century before sets of small interchangeable metal letters were arranged, inked and pressed against paper to form an impression. The start of a printing process that was a less labour intensive way of spreading the written word was here. It was so successful,



that with continual refinements, it remained the industry standard until the 1950's. Since then, the process of off-set litho printing has replaced 'hot metal type'. The biggest leap in the presentation of languages has probably been achieved in the last ten years. With the adoption of computer generated text as a new standard, complicated layouts can now be designed and printed at the touch of a few keys. And it doesn't stop there. Archiving and record keeping works hand in hand with these new methods of processing text and allows far faster methods of data retrieval than ever before. This latest technology has revolutionised the world of print, and has opened the door to an explosion of communication possibilities. At SoftWood our constant aim is to provide you with the most powerful and up to date software possible for your specification of Amiga.



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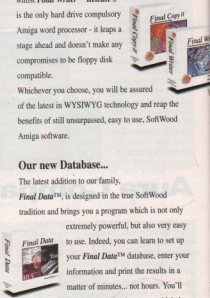
Final Copy II™ Release 2 is at the peak of achievement when running a twin floppy based Amiga configuration, whilst **Final Writer™ Release 3** is the only hard drive compulsory Amiga word processor - it leaps a stage ahead and doesn't make any compromises to be floppy disk compatible.

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World Of Amiga

What a show! The World Of Amiga took place on the 9th - 11th of December as planned, despite no news from Commodore on what was actually happening to the Amiga ...

Despite uncertainty about the Amiga's future, the show we were all waiting for finally materialised, and the Amiga community were there in force. We met a lot of people over the three days so first of all we'd like to wish a happy new year to all of you who came along and visited our stand, bought *CU Amiga Magazine* and had a chat, it was great to see you. The show itself was a low key affair compared with Commodore shows of old, but it was well supported by publishers, developers and magazines and a fun element was added by the provision of a game arcade, amusement arcade and entertainment area.

Bargains and new products were available all over the place and there were even A1200s for sale - which were being bought at a frightening pace. Also selling well were hard drives, modems, CD-ROM drives, CD32s (Silica's Critical Zone CD32 pack went down well) and RAM expansions. By day three, products and software were being sold at silly prices - we came across 710Mb hard drives for around the £270 mark!

Games software publishers were there in force, represented by Ocean, Gremlin Interactive, Team 17, Guildhall Leisure, Anco Software, Kompart and Thalion. New games available were *PGA Euro Tour* and *Jungle Strike* from Ocean, *Super Stardust* and *Tower Assault* from Team 17, *Roadkill 1200* and *Bubble And Squeak* from Guildhall, *Kick Off 3 European Challenge* from Anco and titles like *Football Glory* and this month's coverdisk demo, *Crystal Dragon* from Kompart. Unfortunately the most asked about game at the show, *Sensible World Of Soccer*, was not available - if it was it would have sold out.

Games were selling for anything from recommended retail price (£25-£35) to just £2.00 and there were some very dodgy looking 'adult' CD-ROMs available for the £18.00 mark. The strongest sellers at full price were A1200 titles, which pleased Ocean and Team 17, both of whom have invested heavily in AGA specific titles like *Jungle Strike*, *PGA* and *Super Stardust*.



▲ Digita had a very modern looking stand and were demonstrating Wordworth 3.1 and their budget Mini Office compilation.



▲ Village Tronic, a German company which supplies the Picasso II range of graphics cards for the A4000 and the Amiga 5020. It range of graphics cards not just in the show itself but also in the UK market. They intend to have a full range of products available here in the new year.



▲ Greg of EP Software left and Jonathan Peltier, Director of Special programmes were demonstrating the latest version at Word Development's stand. While talking to him at the CU Amiga Magazine stand several people came up and thanked him for creating the 'best Amiga utility ever'. He was more than a little embarrassed by the attention.

"One of the biggest problems when going through regular distribution channels is persuading retailers that it's worth stocking A1200 software, thus sales of *Super Stardust* haven't been as strong as say those of *Tower Assault*. However *Super Stardust* sold very well at the show which proved to us that the demand is there, it's just that people can't get their hands on the game in the shops," said Alan Bunker from Team 17.

Technical products and productivity software were on display too with both Almathe's *Photogenics* and Cloanto's *Personal Paint 6.1* on sale for around the £60 mark. Also being demonstrated was *Directory Opus 5.0*, previewed exclusively this month on page 88. On the RAM front the most exciting thing at the show had to be Phase 5's brand new 68060 card for the A4000, clocked to provide speed in the region of 50MHz with an 80MHz version planned. There was also a new, upgraded Blizzard RAM expansion for the A1200. These along with the latest Softwood word processor and *Final Data* were being shown on the Gordon Harwood stand and

attracted much attention. Softwood's arch rival Digita had a big stand and were showing off *Wordworth 3* to eager onlookers.

More Amiga expansion excitement was provided by HiSoft, who were demonstrating their Squirrel SCSI expansion and *Termite Comms* software (the latter is reviewed on page 98). The Squirrel is a PCMCIA interface that provides a full SCSI interface without occupying the trapdoor, and attracted considerable attention over all three days of the show. One of the appealing aspects of this interface is that it will allow the easy connection of CD-ROM drives to the A1200, and it will no doubt further push up sales of Amiga CD-ROM drives. While we're on the subject of CD-ROMs, we met several European and US developers who are releasing new CD programs and PD compilations, this is definitely going to be the future medium for public domain software distribution!

On the Blittersoft stand, Jim Drew of Utilities Unlimited fame was showing off the latest Emplant emulator, running PC and Mac software. They also had a 64-bit graphics card to

Report



▲ EMAP promotions manager Nigel Taylor tries to figure out what all those cuddly toys are doing on Nigel's stand. Many thanks to all the readers who came along, said hello and asked our advice over the three days. We hope you enjoyed the magazine. While on our stand Lisa came over to look with a reader whose artwork she showed in catatrophic corner - it came close to fisticuffs, but he eventually backed down.



▲ The presence of hundreds of furry animals (don't worry they were toys) at Nigel's stand was meant to signify something. We couldn't quite figure it out at first, but then it suddenly struck us... could this have something to do with the new 'Squirrel' SCSI interface? Fast thinking eh?



▲ Power Computing had some good hardware available on their range of RIVA upgrades, drives and scanners.

rival that of Phase 5 being shown on the Gordon Harwood stand.

Commodore themselves were out in force but couldn't shed any light on what was happening regarding the management buyout. Rumours were circulating that CEI, an American distribution company had gained the upper hand in the US negotiations but these were dismissed by National Marketing Manager Dawn Levak of Commodore UK and David Pleasance, who was still very bullish about the MBO. One of the most noticeable features of the show was the fact that the Maidenhead management had removed all mention of Commodore from the publicity. This was replaced by the official World Of Amiga logo and the word Amiga itself, which was on all the posters and banners.

The central area of the show consisted of a games arcade and a stage area, where the latest games software was on show and entertainment was provided by, amongst others, Neil Axe, martial arts star of Millennium's forthcoming *Master Axe* beat 'em up. ■



▲ The Team 17 stand where demonstrations of two of their most important games planned for next year were attracting a lot of attention. Warus, their Lemmings-like strategy shoot 'em up and a 3D Doom-style game engine.



Master Axe provided entertainment on the stage. Neil Axe's concrete bar cracking antics were well received by the audience. He's about to see him about to wind up for the assault...



You can tell that this would hurt any normal person. He's about to see him about to smash these blocks...



And so he does it, in massive applause. But our very own martial arts expert Jeff Lee is not impressed... "Once you crack one, the rest go like dominoes."



▲ Against a background which is conspicuous by the lack of any reference to Commodore another member of the Master Axe team smashes two ceramic tiles and a couple of concrete blocks.

Sensible

WORLD OF SOCCER



Sensible
SOFTWARE

SPEED!

A FASTER AMIGA FOR LESS THAN A TENNER!

Is it possible? For most people the Amiga does everything they need, however it could be a lot better. Andy Leaning shows you how with as little as £10 you can make your Amiga better, faster and easier to use.

The Amiga was designed around a very powerful operating system, which was way ahead of its time for a home computer. The basis of this operating system was something called Tripos, a variant of the Unix operating system.

Since then Unix has become recognised as the most powerful, capable and versatile operating system available, used on huge mainframes and graphics workstations. The Amiga designers took this Unix variant, made various changes to it, added their own front end (Workbench) and tailored it to work on a system with no hard drive and smaller RAM stores.

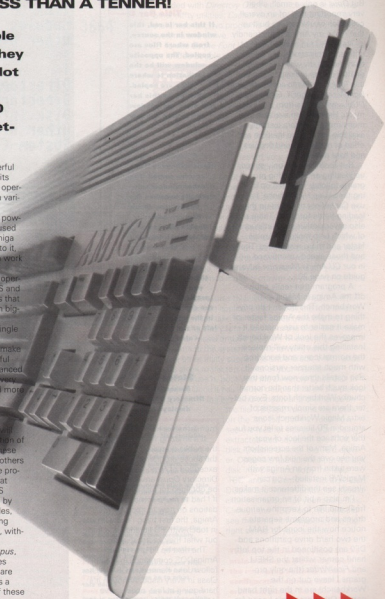
The result was AmigaDOS, a tremendously powerful operating environment that kicks sand in the face of MS-DOS and other microcomputer operating systems. The problem is that as it's based upon a system that was designed for much bigger computers with bags of RAM and hard-drive space, AmigaDOS isn't exactly a speed-fiend when used on a single drive A500 with 1Mb of RAM.

But you don't actually need to add extra hardware to make it better. A peripheral advantage of having such a powerful system is that it's tremendously flexible and can be enhanced in many different ways. With a little knowledge, and for very little money, you can make your Amiga faster, easier and more fun to use.

A NEW COMPUTER

With the aid of a few utilities and programs your Amiga will look, feel and act like a new computer. And, in a celebration of our 100th coverdisk we've included one of the best of these utilities on our coverdisk this month, along with several others to help you on your way. On coverdisk 100 you'll find the program *Directory Opus* - this is an award winning utility that takes advantage of the tremendous power of AmigaDOS whilst also overcoming many of the limitations imposed by Workbench. All of those fiddly operations like copying files, viewing pictures, checking files sizes and de-compressing archives can now be carried out in a fraction of the time, without all the hassle.

Over the page you'll find a guide to using *Directory Opus*, and following that a round-up of some of the best utilities we've come across to improve your Amiga. All of these are available for under £10 each, and either individually or as a group they'll dramatically enhance your Amiga. Some of these tools are so simple that you'll wonder how they can make much of a difference, but once you start using them, you'll wonder how you ever got by without them! Turn the page for an introduction to the amazing *Directory Opus 4*.



MY AMIGA

My Amiga for instance, has *Directory Opus* installed. It's one of the most commonly used programs I have. With it I perform the majority of the file and disk based functions: If I download an archive file from a BBS for instance I use *DOPus* to decompress it. If deleting files I do it from *DOPus*. I also use it for collating the coverdisks. But *Opus* is only a small, albeit very important part, of an overall collection of utilities I've built up that make my Amiga more friendly.

Naturally I run a wide range of different applications, and rather than clicking my way through drawer after drawer looking for them, I use *ToolsDaemon* to access *DPaint*, *LightWave*, *ImageFX*, *Final Writer*, *DOPus* and others from a pull-down menu. Having them available in a menu means they are instantly available - saving me the time and effort of moving around floppies and hard drives.

But *ToolsDaemon* only speeds up locating and selecting programs to load. To speed up loading time I use *HyperCache*. I also use *CacheFont* to speed up the loading times for fonts. There are also several other small utilities all of which help make my Amiga faster and more responsive. These and those already mentioned are in our *CU Amiga Magazine* buyers guide on page 26.

A program that really shows off the Amiga is *Magic Workbench*. This doesn't do anything to make the Amiga faster or make it easier to use, instead it improves the look of *Workbench*. Installing this utility will replace the normal icons and backdrop with much snazzier versions. It also installs three new fonts that look much better than the normal chunky *Workbench* fonts. Even better, there are simply masses of extra *Magic Workbench* icons around in PD libraries to let you further enhance the look of your Amiga. Many of the screenshots you see over the next few pages were taken from an Amiga with *MagicVb* installed - you can already see the difference it makes.

I'm also a bit of an organisation freak and like to keep the various drives and programs separate - notice how the icons for RAM, the two hard drive partitions and *DF0* are positioned in the top left hand corner, whilst the *SHELL* and *FinalWriter* (the only programs I leave out on the *Workbench*) are in the right hand corner. Other programs I need frequently are available to me with just two mouse clicks under a

Quit ● Exit the program and return to Workbench.

Remaining space ● The number here is the amount of space left on the drive currently selected.

Title Bar ● If this bar is red, this window is the source, from where files are copied. The opposite window will be the destination to where they are copied. Clicking on this bar will make the window the source window

Windows ● Clicking in one of these will make it the current source. The other window automatically becomes the destination where files are copied to. Double clicking on a drawer will take you into that drawer. Clicking on the left or right hand edge of the screen will take you back up to the previous drawer, for the drawer displayed in the window on the left or right hand side - also see Parent.

Status Bar ● Messages from *Directory Opus* are displayed here.

DOPUS 1

Welcome back

26852
172
402
227
23

DirectoryOpus
DirectoryOpus.info
Disk.info
Other Utils.info
System-Configuration

df0:

DF0:	All	Copy	Make
HD0:	None	Move	Ass
HD1:	Parent	Rename	Check
PC0:	Root		GetS
RAM:			
C:		DELETE	

CHIP:1773K FAST:7128K TOTAL:

menu, thanks to *ToolsDaemon*.

It's amazing what you can find in the public domain. The majority of the above programs (with the exception of *HyperCache* and *Directory Opus*) are all PD and can be obtained for just a few pounds. If I had to make some recommendations on how to improve your Amiga, the first thing I'd say is get in touch with PD libraries and find out what they've got to offer.

The next tip I'd give is learn *AmigaDOS* commands in the *Shell* - follow John Kennedy's Q&A Master Class in every issue. Although it's hard going at first, once you've learnt it you'll be able to save yourself a lot of time by using shortcuts and quick commands rather than

THE SCREEN

If you followed our coverdisk instructions and booted with your disk you should then see a screen like the one below. This is the main environment of *Directory Opus*, and allows you to perform most disk and file operations quickly and simply.

On the left hand side you'll see a window listing the contents of *DF0*, the internal disk drive. On the right hand side you'll see a window listing the contents of the RAM disk. Below and around these are buttons and gadgets to let you change the drives shown, and manipulate the files and drawers on the disks. In most cases you'll select a file or files from one of these two windows (the source), and then click on a button. The file will then be moved or copied to the drive listed in the other window (the destination). The source window is indicated by the title bar highlighted in red. An explanation for the various gadgets and buttons on the screen is given above and to the right.

If you have been running *Workbench* previously and want to run *Directory Opus* simply insert the *DOPus* disk and double click on the *Directory Opus* icon, the program will now load and run. We'll cover hard drive installation next month.



Drive Buttons:

Here you'll find a list of the main drives. Clicking on these will change the window to that device.

All: Selects all drawers and files in the source window - saving you time.
None: Deselects all selected files in the source window.
Parent: Moves back to the previous drawer you were in.
Root: Moves back to the root dir.
Copy: Highlight one or more files in the source window, click on copy and the file(s) will be copied to the destination.
Move: Just like copy, except the file(s) in the source window are deleted after the copy operation.
Remove: Click on one or more files and then on this button and you'll be asked to enter new file names.
Delete: Highlight files and drawers and click here to delete them.
Warning: you can't get these back once you've deleted them.
MakeDir: Prompts you for a name and then creates a drawer with that name in the source window.
Assign: To be covered next month.

Checksum: Add up the sizes of all selected files/drawers and sees if they will fit on the drive in the destination window. The result is displayed in the status bar.
GetInfo: Similar to Checksum but a quick approximation.
Name: Search the selected files and drawers in the source window for a given file name.
Search: Scan through the files and drawers selected for a given line of text.
Run: Executes the selected program or programs. You'll be asked to enter parameters, see the individual program manual for details of these parameters.
DateStamp: Changes the date stamp of selected files to that entered. For the current date press the space bar and then return.
Protect: To be covered next month.
IconInfo: Changes icon parameters, similar to that given in the Requester when you click on Info menu on the Workbench.
Arc Extract: Extracts files from compressed 'LHA' archives to the destination path. LHA is a common compression

system used by public domain software and BBS systems. Not available on 1.2 Amigas.
Encrypt: Adds or removes password protection to files. Select a file, click on this and enter a password, now you can only access it if you know the pass word.
Remove: To remove the password click on this button and enter the password with a minus symbol '-' at the front of the password.
Read: Displays the selected text files.
Hex Read: Displays a file using the Hex numbering system, probably only useful to programmers.
Show: Displays an BVX, animation, icon or font file.
Play: Highlight an SVX sound file and click on this button to hear it.
Print: Three guesses as to what this does?
Path Names: These two allow you to type in path names, rather than clicking on drawers - if you know the full path name this can save you a lot of time.

Files/Drawers:

In these windows, drawers are coloured blue, files red. Move the mouse over one of them and press the mouse button once to highlight it. Now refer to the buttons below for details on the operations you can perform on it. You can also select more than one file by dragging the mouse pointer over several files, or press shift and the mouse button to select other files and drawers.

OTHER UTILITIES

Included with *Directory Opus* on our coverdisk are two other nifty utilities: *CacheFont* and *Little-Clock*. Note that these last two programs only work on Workbench 2 systems and above.

To use *Cache Font* load *DOpus* as normal, and once it's loaded double click on the drawer UTILITIES. Now

HELP!

Directory Opus has a comprehensive built-in help facility. To use this press 'HELP' on the keyboard and then click on any part of the program, a help screen will then be displayed. You can keep on clicking on things to get help until you press 'HELP' again.

highlight the files 'MakeFontList' and 'CacheFont' and click on the COPY button. This will copy these to the RAM disk. Now insert your normal Workbench disk into the drive and copy the two files you've just copied to the RAM drive to the C directory of your Workbench disk. Now restart your Amiga with your normal Workbench disk in the drive

and double click on SHELL icon. Type in 'MakeFontList' and press return. Now type 'CacheFont' and press Return. Your font requester should now appear much quicker. To try it out load a normal application and try changing fonts - notice how much faster it is bringing up the list of available fonts? Hard drive users can also install this program by simply copying the above files to the C directory on their hard drive. If you want the program to load automatically everytime you turn on your Amiga, add the line 'CacheFont' to your Startup-sequence in the S drawer of your Workbench disk.

CacheFont works by building a list of the fonts. Then when you ask an application to display the font loading requester it can take the font names from this list rather than reading every font name from the disk. You'll need to run the 'MakeFontList' program whenever you add new fonts to the system for this to work however.

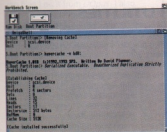
The other utility supplied is *Little-Clock*, which adds a little clock to the top corner of your Workbench screen. To use it, boot with the *Directory Opus* disk in the drive. Once it has loaded double click on the drawer 'UTILITIES' in the left hand window and click once on the file 'TBC252.lha' and then click on the 'Arc Ext' button. You'll now see the files for this program being extracted and saved on the RAM disk. Double click on the TBC drawer. Once this has finished put a blank disk into DF0, and copy the files 'TBC' and 'TBC.info' to this disk. Quit *DOpus* and run from Workbench double click on the icon for your spare disk. Click on the 'TBC' icon. You should see the time now appear in the top right corner of your screen.

The instructions left cover all the main buttons in *Directory Opus*, the remaining buttons, menus and configuration options will be covered next month. Turn the page over now for a comprehensive guide to other utilities to improve your Amiga.



We've shown you how to use Directory Opus. Now we reveal several low cost programs to make a real impact on improving your Amiga.

HYPERCACHE



We included this impressive program on our January coverdisk. This simple-looking utility will make a massive impact on disk loading times, and is a must have utility for any Amiga owner. It works by intelligently guessing what you will load next and stores this in RAM before you load it, then when you actually load it, it's already in RAM waiting for you. In reality it's a bit more

complex than this, but at the end of the day it improves loading time and that's what matters.

To use it, copy the *HyperCache* program from our coverdisk to your Workbench disks. Now edit your startup-sequence to include the line "Hypercache -v DF0:". For details on how to do this see last month's issue (January '95). If you don't have this issue you can order it from our back issues department on 0858 468888. Alternatively you can get hold of the very latest version of *HyperCache* from Wizard Developments, tel 0322272 908. Price: £29.99. Following on from last month's tutorial on *HyperCache* you can also set the size of the amount of memory that *HyperCache* allocates for caches. Note: if you don't understand the following don't worry, you can ignore this bit as *HyperCache* works these out for you, this will only really be interesting to technical users. Setting up the size of *HyperCache* buffers is done using three parameters, '-s', '-l' and '-p'.

The '-s' is the number of caches set up for a device. Although you probably think of the cache as one single cache, *HyperCache* actually creates several - in the hope that if the data about to be loaded isn't found in one, it will be in another. Eight cache sets are defined by default, any other numbers entered must be an even power of 2, ie 2, 4, 8, 16. The '-p' is the number of sectors this utility loads in at once (the prefetch), the default is 'four', and again numbers entered must be a power of 2. The last parameter is '-l' the number of lines, this being the number of sector groups in each cache. The standard is 8 sets each with 32 lines of 4 sectors each, giving a total of 1024 sectors in memory at once, each sector occupies 512 bytes so in total 512k is used as a cache. So to set up a cache on DF0 with a size of 512k you'd use 'HyperCache -v DF0 -s 8 -l 16 -p 4'.

TRASH-IT

After using the Amiga for a while, I found that the window that housed the Trashcan always seemed to cover the file I wanted to delete. Maybe there's some unwritten law at work here, like wrong numbers are never engaged.

A remarkably simple utility solves this problem once and for all and has probably saved me more time over the years than most other programs. *Trashcan* places a Trashcan on the Workbench screen - outside of the normal windows. All you need to do is drag the files to it and they're gone, and because it's on the Workbench it's rarely covered up with another window. Written by Mark McPherson it's

an invaluable utility that I'd be lost without. Order it from your PD library as soon as you can.

Another brilliant time saving utility and one that will definitely make your Amiga seem faster is *ToolsDaemon*. This wondrous little program sits in the Startup drawer



and lets you add extra menus to the normal Workbench menus. The great thing is that you can now have applications and programs instantly available - just click on a menu. Why waste through several drawers looking for *DPaint*, or the icon editor - move the mouse up to your new 'Tools' menu, and click on *DPaint* and it's loading for you. Hard drive

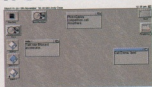
FASTER FONTS

If you regularly use fonts you'll know about the lengthy periods of time it can take to bring up the list of fonts before you select one, especially if you've got a lot of them. Well, use the simple PD program *CacheFont* and that'll change forever.

It works by building a list in advance and then when the font requester is displayed it's already got the list ready, saving considerable time. Written by Adam Dawes it's a handy little utility that has probably saved us hours since we've been using it.

CacheFont is public domain and is also available from most PD libraries advertising in *CU Amiga Magazine*, try 17-bit Software who charge £1.50 plus postage (50p).

IT'S A STICK UP



Amiga and lets you stick little post-it-note windows onto your Workbench screen. It's pretty simple, but also rather effective and has certainly found a home on one of our A4000s. The advantage of having this program is that it can help in the organisation of your time - reminding you do something - and in this sense is worth having on your Amiga.

It's a simple stand alone program and requires no installation, you simply double click on it and you're away. Once it's up and running you can add new stick-it-notes, edit them, and tell the program which notes should be displayed. It only works on Workbench 2.04 and above systems, but is worth having if you've got this system.

It's written by Andy Dean and your PD library should be able to get it for you, it's also on the *Aminet 4* CD collection.

A CUT ABOVE THE REST

Do you ever need to transfer text from one application to another, say from a word processor to a DTP program, or maybe a from the SHELL to *NCOMM*? If so you'll love *PowerSnap* from Nico Francois. This allows you to cut and paste text between programs. Simply highlight the text you want, press left-Amiga-C to copy it and then left-Amiga-V to paste it - absolutely brilliant. Available from your PD library.

LESS IS MORE

PowerPacker Patch is a program which allows you to load power-packed files into normal Amiga applications. For example, *DPaint* would not recognise a power-packed JFF, as the file structure would be different. The *PowerPacker Patch* removes this problem by decompressing power-packed files in the background as they are loaded - you don't even notice it's happening. Available from most PD libraries. And that's it, if you come across any other good PD utilities send them to us.



Every day in the Royal Navy redefines the word 'busy.' To start with there's the training. In the middle there's the training. And to end with, yes, there's the training. It's intensive, certainly. But we're not too proud to admit that half the point of joining the Navy is to be well qualified when you leave. However, the brain isn't the only part of your body

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i

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Which Computer?



Is the Amiga really top of the heap when it comes to personal computers? Have we been kidding ourselves all these years? John Kennedy takes three sub £800 Amiga, PC and Mac options, locks them all in a small room, and retires to a safe distance ...

computer system to stick with (or move to), we've created a comprehensive list of comparisons for you to read. We've tried to be as unbiased as possible (honest!) but if you enjoy a good argument, you can always read it out loud in the computer club.

The plan is simple – you have £800 burning a hole in your pocket, and you want a home computer. If you want a games console, then be honest and go read *Computer and Video Games*: we are talking proper computers here.

For all that money, you can expect to get the computer itself, a monitor that can display a high-resolution colour screen without inducing epilepsy, a hard disk and something in the way of sound effects.

The system must be able to be used as a word processor, but it must also be able to play games. We are looking for all-round versatility, as well as value for money.

We have picked out three different systems to examine in detail – a PC clone, an Apple Mac (and surprise) an Amiga.

As there is only one manufacturer of the Amiga and Mac, their model numbers and prices are well known. The PC is different however, as there are hundreds to choose from. We have selected a hardware configuration which if you shop around and haggle, you should be able to get for £800: we certainly managed it by checking with advertisers in the PC mags. What ever you do, don't settle for a 386 processor – they are now considered obsolete.

The Microprocessor: Intel vs. Motorola

Both the Amiga and Apple Mac use processors from the same Motorola family – the 680x0

range. The A1200 uses a 68020 processor, which is a 32-bit system running at about 14MHz. Plug-in accelerator cards are available which feature the faster 68030 chip operating at speeds of up to 50MHz.

The A4000 is available in versions which use the 68030 and the 68040 – and plug-in cards are available to provide the A4000 with a 40MHz 68040 – currently the fastest you can buy.

The Apple LCIII comes with a 25MHz 68030, and other Macs come with 68040s operating at various speeds. Due to improved design, a 25MHz 68040 is about two to four times faster than a 25MHz 68030, which is about twice as fast as a 68020.

Motorola designed the first 68000 from scratch as a 16/32-bit processor. They didn't want to be stuck with incompatibility problems further down the road, and ditched their popular 8-bit 6800 completely.

Conversely, all PC clones use processors (or compatible processors) from Intel, the 80x86 family. Intel kept compatibility with the 8088 for their 8-bit processor – and every processor they have made since has to include special options to work around this bottle neck, including emulation modes and all manner of tricks. The 80486 is an extremely fast processor – but it could have been so much better. In particular, memory addressing techniques on the Intel family are bizarre – and nothing like the simple sequential one-address, one-memory location system used by Motorola.

The follow up to the 486 is already out – the Pentium. It is faster (especially the 90MHz systems), but not by as much as everyone hopes for, and often it is possible to get similar speeds by using extremely fast 486s.

The new Motorola chip, the 68060, is apparently very nearly with us (samples have been supplied) and so Amiga accelerator cards featuring it may appear soon (see news). The 68060 (the 68050 was scrapped) runs much faster than the 68040, and also a lot cooler –

Looking for a fight? Nip into your local computer club and start saying "My computer is better than your computer". Computer owners will fight to the death to defend their chosen system (although no fatalities have actually been reported), and often no amount of logical argument can persuade someone to change platforms. The UK home computer market is an unpredictable place. One year consoles are in, then computers are happening, then it's consoles again. It's a place where the most technically advanced products don't always fair the best, and where nothing is certain other than gory games sell best at Christmas.

To help you make your mind up as to which

The Contenders

The comparisons and tests on the following pages are all based upon these three set-ups: an IBM PC clone, an Apple Mac LCIII and an Amiga A1200.

IBM-PC Clone



In the grey corner we have the IBM compatible PC. In the last year or so, the PC has really taken off as the Neme Computer of choice - more so with the novel introduction of the 'multi-media PC's: basically a PC with a sound card and a CD-ROM drive.

Price:	About £300
Processor:	80486DX
Speed:	33MHz
Memory:	4Mb
Hard drive:	210Mb IDE
Operating system:	Windows/Dos
Interfaces:	2 serial, 1 parallel, mouse
Monitor:	16 inch colour high-resolution
Graphics:	Local bus SVGA card, 256 colours, 800x600. Most cards capable of much higher (>1024) resolutions with more graphics memory and better monitors.
Sound:	Depends on sound card, but usually multichannel 8bit or 16bit with mono sampling input.

For a little bit more you could get ...

A 486DX66 computer: same specs but twice the raw processing power. For complete MP2 (multimedia 2 compliance) you will also need a double speed CD-ROM drive, and a 16bit sound card. The above system is typical of one you can pick up if you shop around - and prices are only going to fall. Remember that you will also need a sound card (which usually includes a joystick port and sometimes a MIDI and CD-ROM interface).

Apple Mac



Making serious inroads into the home market is Apple, with the 'Low Cost' version of their popular Macintosh systems. Designed to be stylish, powerful and to be easy to use, Apple has carved itself a niche in many markets, supposedly appealing to creative sorts rather than tech-heads.

Price:	£760
Model:	LCIII
Processor:	68030
Speed:	25MHz
Memory:	4Mb
Hard drive:	80Mb SCSI
Operating system:	System 7
Interfaces:	SCSI, AppleTalk, Modem, Printer, Sound, keyboard mouse
Monitor:	14inch colour high-resolution
Graphics:	256 colours, 640x480 and 832x624 512K VRAM standard, expandable to 768K. Can be expanded to give 16 bit colour at 640x480.
Sound:	8 bit 22KHz mono in, stereo out.

For a little bit more you could get ...

An Apple LC475. Similar specifications but with a 25MHz 68040 processor. You could also invest in a double-speed CD-ROM drive connected externally to the SCSI interface. Apple's feel lonely without printers, so add a StyleWriter inkjet to the Christmas list as well. You might also consider getting a larger hard drive, although being SCSI based these can be a little expensive compared to Amiga/PC IDE drives.

Commodore Amiga



The computer we all love, and probably the only true 'home' computer left. It killed off the 8-bit systems (the Spectrum, CPC, C64) and fought off the ST as well. It has seen many improvements from the early days of the A500 and A2000.

Price:	About £800
Model:	A1200
Processor:	68020
Speed:	14MHz
Memory:	2Mb
Hard drive:	80Mb IDE
Operating system:	AmigaDOS / Intuition
Interfaces:	Parallel, Serial, composite video, stereo sound, joystick, mouse, PCMCIA
Monitor:	14inch colour high-resolution (Ricker free)
Graphics:	256 colours 640x512 standard modes, 262,000 colours HAM8 modes up to 1448x566 or bigger 4 channel, 8-bit stereo out.
Sound:	

For a little bit more you could get ...

More memory. In fact, consider some fast memory for the trapdoor an essential purchase. For the £800 you should be able to get at least 1Mb of Fast Ram, which will double the speed of the computer immediately. For a little more, a card such as the Blizzard double speed 4Mb memory expansion is a worthy while investment. You could also think about a slightly larger hard drive, or possibly an external PCMCIA CD-ROM drive.

which means it may even be possible to fit one to an A1200.

The PowerPC is a new type of processor, created by a collaboration of several big manufacturers - Motorola, Apple and IBM. Already Apple are using it in their new machines (they got bored waiting for the 68060's) and IBM are planning on creating PCs which use it to - which means a common Apple/PC platform.

Commodore have stated that they would prefer to go the way of high-speed RISC processors rather than use the PowerPC which is a shame: the Amiga Workbench would have flourished on other hardware.

Comparisons

If you could judge the worth of a particular computer purely on something like the speed of its processor, there would be no need for the article in the first place. However, each of the machines here have their strong points and their faults. The old 'horses for courses' adage is all very well, but which horse is right for your particular course? The following comparisons aim to give you the answer. We've put the three computers head-to-head in eight categories: expansion, networking, graphics, operating

systems, music, communications, games and serious software. Our ratings are as objective as possible, and have all been concluded from years of experience of all three systems.

Scores out of a maximum possible five have been given to each system at the end of each section. Let the battle commence ...

Expansion capabilities PC

The PC has always been touted as the most expandable computer ever - and rightly so, because its modular design owes much to the fact that you need to add quite a lot of hardware in order to get it to do anything useful.

There are thousands of different combinations possible when putting a PC together, as there are hundreds of sound cards and graphics cards from hundreds of different manufacturers.

The competition keeps the price down, but it also keeps compatibility down. It can take a long time to adjust all the settings and jumpers on the cards to get them to work together properly; and sometimes it's just not possible. Adding a modem card is a good example - you will need to ensure the card doesn't clash with

the mouse and still works properly with any I/O and video cards. Great fun!

Amiga

The Amiga on the other hand uses a system called 'Autoconfig' which the PC can only dream about. At switch on, any cards present introduce themselves to the operating system and are automatically allocated resources. There is nothing quite like it on any other system, and although future PC operating systems may promise it, you can be sure it's not to go happen for a while.

Of course, to be strictly fair this isn't a good comparison, as the A1200 model does not have any true Zorro expansion bus sockets - only a trapdoor and a PCMCIA slot. The trapdoor is more advanced than that of earlier Amiga models, and not only can memory be added quickly and cheaply, but faster processors too - a 50MHz 68030 can be installed which will run extremely quickly. Cheap SCSI2 controllers can be added to many of these accelerators which means adding extremely large storage devices is a real possibility. The trapdoor provides a home computer with a relatively easy way of adding more options - without having to open



AMIGA

the lid and poke around inside. Just recently, more add-ons are appearing that make use of the PCMCIA slot. These include a new 12-bit sampler and also a SCSI interface.

Apple Mac

The Apple Mac was not designed for people who like to lift the lid and rummage around inside, although it has to be said that the LCIII is a beautifully designed piece of hardware. Everything from the plastic case to the keyboard oozes quality. Opening the LCIII is easy – the lid unlatches at the back and slides forward and off. Inside is a minute circuit board (with a PLCC socket for a 25MHz 68882 maths coprocessor) and a single blank SIMM slot. The floppy drive, the hard drive and a fan take up the rest of the space.

There is also a single NuBus expansion slot, which is available for processor expansion but that's about all. There aren't a lot of add-ons for Apples, most are accelerators graphics cards. However the 25-way SCSI connector at the back is a good thing and makes adding extra hard drives and SCSI CD-ROM drives easy.

Remember, up to seven devices can be chained from a SCSI system which makes for a lot of possibilities.

Networking

Connecting two or more computers together in order to share data and resources is extremely useful. For example, in an office several users may want to use the same printer without having to walk around with documents saved to floppy disk in their hands.

PC

To network PCs you need to buy a card for each computer. You've probably heard of Ethernet or Novell Netware, and this is what it's all about. You can get a networking card for about £50 and the current release of

Windows (Windows for Workgroups) handles the software side of things.

Apple Mac

It's even easier with a Mac thanks to AppleTalk. Plug a few cables together and the job's done, although when the numbers start to grow and there is a lot of data heading to laser printers, the system will soon start to slow down.

Amiga

And then there is the Amiga. What have we got? Very little unfortunately. Remarkably, for an operating system which can handle multiple processes like no other, support for networking is marginal. It was starting to creep into view with the very latest Kickstart releases, but at the moment adding an Amiga to a network is not easy. Ethernet cards have been built, but tracking them down and obtaining the relevant software is not a task for the faint hearted. Linking two machines with ParNet is one thing, but true networking is not a viable option at the present time.

Operating Systems

PC

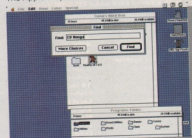
Windows is rubbish. Sorry to be so blunt, but you won't be able to convince me other wise. It is slow, it eats memory and absorbs hard disk space. Even on extremely fast hardware, it is not fast.

A lot of this is due to the backward nature of PCs, always having to run software that worked on the very earliest systems. Windows does offer a form of multitasking – when you press ALT and TAB, you can switch to different applications and

and "Windows for OS/2" and the current version (called Warp) seems to be both stable and useful. It is also possible to run Unix compatible operating systems such as Linux, and even use a GUI-like XWindows on it. NeXTStep – one of the most advanced operating systems – is also available, but this is starting to get well beyond our price range; and besides, you can't play Doom on NeXTStep. Yet.

Apple Mac

The Apple's System 7 is also a simple task



▲ An extremely sensible inclusion to the Apple operating system is the ability to specify the name of a file and then go and find it – something the Amiga could surely do with.

switching operating system, although it is a lot more sophisticated than Windows. Even absolute beginners can quickly get to grips with a Mac – from the smiley little face from power-up – the new user is not frightened away with technology for technology's sake.

The downside to the Mac's systems is that it can be very claustrophobic. There is simply no 'disk operating system' as such – everything must be done with the mouse and some menus or it simply cannot be done (and you have to eject disks with the mouse, which sometimes the software doesn't let you do – infuriating!).

Amiga

Once again we come to the Amiga, but this time things are looking up. Workbench has matured from a very sad (by 1990 standards) orange and blue operating system into an extremely sophisticated environment with the release of Workbench 3.1.

The Amiga's Workbench doesn't run "on top of" a disk operating system and it certainly doesn't take up vast quantities of memory and hard

disk space. Little things – like the moving the pointer across the screen – use little amounts of processor power, unlike the PC which uses a fearsome percentage just handling the Windows and Icons.

Quite amazingly, Kickstart – the heart of the Amiga – lives in a pair of 512K ROMs, and not much else is required for a fully useable system. It can even be used entirely from floppy disk if necessary, although with a hard disk it really takes off.

Adding the finishing touch with a nice colour scheme, a tasteful backdrop and some well-drawn icon replacements (MagicWB) will

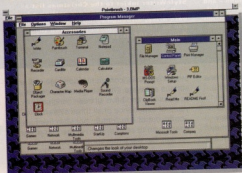
Portable Options



There is one area where the PC and Apple score heavily over the Amiga, and that is

portability. It is possible to choose a complete, pick-up-and-go notebook computer from a range of Apple Powerbooks and clone systems. There are many screen and processor options, including Apples with fast 68040s and superb colour screens, and PCs with 486 processors and colour displays which are sometimes better than dedicated monitors.

Portable systems have a niche market for people on the move, usually business types who can afford to pay extra for the flexibility that a portable computer can give. A portable Amiga seems extremely unlikely: ever.

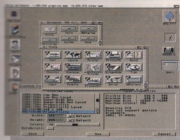


▲ The main Windows screen on any system looks very similar to this. Notice the accessories window includes a terminal for modems, and the presence of networking software as standard in Windows 3.11

leave others running in the background.

However, Windows is not a pre-emptive multitasking system. In other words, the Operating System does not have overall control over the programs which are running. Instead, each program does a little bit of work, and then when it considers it has done enough it passes control over to the next. This may sound OK in theory, but in practice it is slow and when one program goes wrong, the entire system falls over.

The good news for PC owners is that there are choices. OS/2 is what IBM wants all PCs to be running instead of Windows. In fact, you can now get combinations of 'OS/2 for Windows'



▲ Changing aspects of the Amiga's operating system isn't hard. Remember, none of the other platforms can run safely off floppy, so at times it's a lot less hassle. OK, so 256 colour Workbench displays are a little slow, but give me a graphics card like a Picasso II or Netma and we'll call it quits.

ensure an environment that a dedicated graphics workstation would be proud of, and when you start to add the 'extras', *ARexx*, *Multiview*, *Datatypes*, *Commodities* and so on, it becomes plain that the Amiga's OS still years ahead of any others in terms of sheer usability.



▲ On-line help is present in many programs thanks to the very flexible *AmigaGuide* system. Incidentally, *Spot* is a program that Amiga users can be proud of too...

Communications

All hail the mighty RS232C! Yes, thanks to one of few standards ever seen in the computing world, any external modem you can buy today will work with any of the three systems – but that's not to say that some aren't better at handling comms than others. Newer operating systems for the Mac and PC promise to include TCP/IP in an integrated form. For those who have avoided anything starting in 'information', ending in 'highway' and containing the word 'super' in the middle, TCP/IP will make connecting these computers to the Internet a lot easier. Sadly, the Amiga has fallen behind in this area, and any extensions will continue to be third-party additions for the foreseeable future, rather than integrated additions to the operating system.

Serious software

PC

Do we really need to go through with this? OK, so the PC has more and better business programs (including Word Processors, Databases,

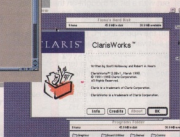


▲ *Claris Works* – again. Many programs appear on both the PC and the Apple Mac. With the effort in writing an Apple version (which shares the same processor as the Amiga), it's a shame there are hardly any programs on the Amiga. It's a cruel world, I know, but we must struggle on.

Spreadsheets, Desktop Publishing, Programming tools) than any other system on the planet. Of course, most of them are rather expensive, but they exist – which is why nearly every office in the world has a PC in it.

Apple Mac

Perhaps surprising to some, but the Mac also has a good range of software. PC-giants Microsoft certainly have helped by developing some of their top packages (Word for example) for the Apple platform. In fact, overall with an Apple you'll be able to do just about everything you could do with a PC in this area.



▲ Look familiar? It should – it's also running on the PC. Apple actually set-up a software house to create good business software. Now, why couldn't someone we all know set have done that?



▲ *Final Writer* may lack the finesse of Microsoft Word, but it certainly beats the pants off *Claris*... Add *Final Data*, *Terminator* and *Deluxe Paint* and you've got all you need.

Amiga

Oh dear. What a sorry bunch we are when it comes to serious software. None of the 'big' names in software would touch the Amiga with a pole, and instead we have our own gallant band of software producers. However, all is not lost: when Amiga software is good, it is very good indeed. *Final Writer* is an excellent program, and the *SuperBase* database system is reasonably featured. There is even a new spreadsheet available – so things mightn't be as bad as they first appear. However, the amount of choice in terms of business software is poor.

The flip side of the coin is multimedia authoring systems. The excellent *graphics* and efficient operating system (and *ARexx*) means that integrating animation, sound, MIDI music, high-resolution images and text is much easier on the Amiga than another other platform. The Amiga even had CDXL before the PC had the very sad Video for Windows, although not many titles made use of it.

Graphics software

PC

The nearest software to *Lightwave* or *Ad Pro* on the PC is good – it should be, it is ludicrously expensive. Autodesk and the like cost thousands. Graphics software on the PC hasn't caught the attention of home users in the same way as it has with the Amiga – even though there are many paint programs available, none are as widely used as *Deluxe Paint* on the Amiga.

Amiga

Lightwave is something the Amiga community has always been proud of. It's used right across the board in professional video production, from the Hollywood studios, to the spinning news logos, to the experimental images used in pop videos and sweaty raves. Fans know the Amiga and *Lightwave* is something really special.

Post-processing software on the Amiga is good – programs like *Art Department*, *Professional* and *ImageFX* are simply not available for anything like the same price (if at all) on the PC. *DPaint* and *Brilliance* have no equals.

Apple Mac

The Mac has a real grip on the professional illustration market with *Photoshop* and *Illustrator*: both are superb programs which rightly deserve their success – there is still nothing to match it on the Amiga, although *Photogenics* is coming close.

For many, the Mac's biggest advantage is *Quark Xpress* – the Desktop publishing package you find responsible for just about every magazine you can buy. There is nothing to touch Quark on the Amiga (including *PageStream* 2), and arty designer types wouldn't be seen dead using a boring old PC.

Games software

Amiga

The way PCs and Amigas generate graphics is very different. The Amiga has a sophisticated chipset that was designed for video games in

the 1980s. As a result, it is terrific at scrolling, offers lots of scope for graduated coloured backgrounds and offers hardware sprites.

The video output is excellent quality, and a built-in modulator means that connecting the Amiga to the family telly like a games console is easy. Games are cheap and plentiful – they make more money for retailers than expensive cartridges for Segas and Nintendos.

PC

The PC on the other hand, has a graphics card and a fast processor – and that's about it. It's not subtle, but it is fast and ideally suited to 3D type games, rather than scrolling platformers. This is why games like *Doom*, *X-Wing* and *Formula 1 GP* work extremely well on PCs. There is no sensible way of connecting a PC to a TV set, but 14 inch colour monitors are a ubiquitous part of a PC set-up, so this doesn't seem to worry most people.

However, actually getting games to run on a PC is not always very easy. Remember that 640K limit? Obviously the manufacturers got around it, but it is still lurking there. You need to have as much of that memory free as possible – which means switching off many of the standard DOS facilities (like being able to recall the last line of text you typed at the C: > prompt). As a result, many PC owners have written their own special boot time menu to remove the extra software whenever they want to play games. This sort of technical requirement can really cramp the PC's attempts to be the 'games console of the 90s' – it's certainly not as easy as slamming a cartridge into a slot and pressing ON.

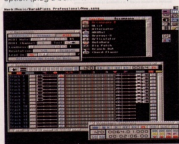
Apple

Until recent price cuts, not many people in this country could afford to have a Mac at home, and certainly not one for playing games. That is changing, and more and more top titles are beginning to appear on the Apple – some CD-ROM titles especially are extremely innovative. The Mac is held back because the Operation System is hard to

ignore, and games really need to run in a system-friendly way. The lack of any gee-whiz video chips also means that fast action, multi-coloured scrollers really have no chance on the Mac.

Music

Although none of the big three have any standard MIDI ports, all can have them added. Once again the Amiga is the cheapest and easiest option (plug a box into the serial port – no need



▲ Software like the multi-talented *Bars and Pipes* proves there are still some things which can only be done properly on an Amiga.

to mess with drivers or IRQ/DMA numbers: yeuck) and it's a shame the CDTV was the only model to have them as standard.

Standard sound capabilities are pretty poor (although the 630 range of Apple Mac has a respectable 16-bit sound output) so extra musical hardware is a must. Several manufacturers are building Mac and Apple interface options into their MIDI gear as standard (Korg for example), but with a bit of thought on their part an Amiga could also have been supported: more machine-ism in action.

Both the Apple and PC had the big boys providing software, with CuBase and others available and well supported. But they are expensive and can't touch *MusicX v2* in terms of flexibility. *Bars and Pipes* proves that the Amiga is the ultimate multimedia machine, as it can control extra hardware and sequence animations as easy as it plays notes.

Conclusion

It's inevitable that the PC will continue to dominate the market – there are simply so many of them out there. However, they are still based on a design that was fixed in the 1970's and backwardly compatible with 8-bit processors. If you are a conformist, someone who doesn't want to be different or stand out, by all means buy a PC (in which case check out our sister magazine, PC Review). You'll be getting a good deal, but as prices fall almost daily, don't expect your machine to cost the same in 6 months time: it will probably be out of date. You'll get your Word Processing done alright, but the software won't be cheap. If you want to play games like *Doom II* and *X-Wing*, then yeah: they are only available for the PC. If you want to pay out £50 a go, and fight with DOS over that 640K limit then go ahead.

If you like the look of Apple, remember that as home computers they still have a long way to go. Small business use yes – but as the number one system in the house, probably not. Software is available, but it is extremely expensive. Public domain software doesn't exist – it's all Shareware in AppleLand. The really good thing about a Mac is that it isn't a PC, and as a result it is a lot easier to use.

On the other hand, perhaps you enjoy working with computer graphics. Perhaps you like being able to buy a good game for £20 (or less) and play it on the family TV. Perhaps you like good quality public domain software, and a thriving community spirit.

Maybe you want to be able to use an operating system without driving yourself insane by finding out there is no way in to the level of access you need.

You would certainly not lack a good word processor or a DTP program good enough for semi-professional use, and you might be tempted to add sound systems, image grabbers, hard drives, modems, accelerators and memory expansions when you wanted and not have to struggle with IRQ and COM port numbers. You might want an Amiga. ■

EXPANSION



The Amiga has excellent configuration options, lots of cards to choose from, but are all rather expensive.

NETWORKING



Enhancing, isn't it? It should be good at networking but at present it's still difficult to get a good Amiga network.

OPERATING SYSTEMS



The Amiga has a true, memory efficient pre-emptive multitasking and therefore powerful operation system.

COMMUNICATIONS



The Amiga has a reasonable amount of software, and no problems at all with multi-tasking it.

SERIOUS SOFTWARE



The Amiga doesn't have all the top programs, but what's there is good and will be enough for most uses.

GRAPHICS



Lightweight and other rendering programs are the Amiga's strong point, with Brilliance and Photopaint also helping.

GAMES



The Amiga is still one of the best gaming platforms in the UK and has a massive range of good quality titles.

MUSIC



Whether you want to spend £30 or £300, the Amiga can accommodate your musical desires.

Jargon

● **486SX/486DX**
A 486SX is a fully 80486 processor whereas the SX lacks a maths co-processor.

● **486DXG**
You often see processors quoted in this manner. It means the 486 operates internally at 60MHz, although externally it works at 33MHz: it's double clocked. In the same way, a 25MHz 68040 operates at 50MHz inside – but Motorola just don't go as about it as much.

● **68882**
A maths co-processor, for helping out a 68020 or 68030. The 68880 has the majority of the 68882 built-in, and therefore doesn't need one.

● **Local Bus**
A PC expansion bus that couples peripherals tightly to the central processor. The result is an increase in speed at the expense of a little flexibility.

● **MHz**
A measure of the speed at which operations are carried out inside a processor. It is pronounced 'mega – hertz' and means 'billions of clock cycles per second'.

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CU

AMIGA SCREENSCENE

MAGAZINE



IT'S BEEN A MIXED MONTH for games.

There's some goodies in the shape of Shadow Fighter, Mortal Kombat II and The All New World Of Lemmings, but there's been a couple of whiffy

ones too, most notably Charlie J Kool and Shaq Fu. This year looks as though its getting off to a hot start on the games front, see our First Impressions previews of The Chaos Engine 2 and Frontlines - and of course there's Team 17's Worms to look forward to as well. We'll have an exclusive preview of it next month. Software houses seem to have been taking your hints to heart about games being Hard Drive installable of late, though not everyone has been listening - less than half of this month's games are. Finally, the prize for the Return of the Complicated Copy Protection System goes to Gremlin who have included one of those infamous 'wheels' with Shadow Fighter. Oh well, at least you only have to use it once per game.

Alan Dykes



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how it works...

This is what the game is called, just in case you don't read headlines.

So what will it work on? If your lucky number is lit up then the game in question should work on it. Unless last minute changes are made which we don't know about.

You can trust our game critics. The best judgement on the best (or worst) games.

CU AMIGA MAGAZINE

A500	workbench version	most
A500+	number of disks	2 usually
	RAM	1-8 MB
	hard disk installable	often
A600	graphics	99%
A1200	sound	99%
A1500	instability	99%
	playability	99%
A2000	OVERALL	
A3000	The best Amiga magazine you can buy.	99%
A4000		

How many disks does it come on? Is it hard drive installable? All these important questions which dictate whether your machine or patience will be tested.

Where would we be without these old gems? Four aspects of the game broken down into individual scores for your perusal.



We've changed our award policy this issue, mainly because we thought too many people were getting all lightly receiving an award for something that scores 95%! The new Super Star award, as awarded by the lovely Helen Basky, will go to games and productivity software and adapters that receive 95% or more in our exhausting test process. That should sort 'em out.

FIRST impressions

More new games get the First Impressions treatment as we look ahead to a bright new year.

Frontlines Impressions

The Gameplay: More strategy fare from Impressions, this time set in the future. It's the year 2040 to be precise, and war has broken out on the 100th anniversary of Pearl Harbour. Basically we all thought world markets and free trade would solve the problems of the human race, but some men have become too powerful and rich and are determined to carve up the democratic world with mercenary armies. You, as a

democratic military commander (we didn't think such a thing existed) will attempt to stop them using all the might of modern weaponry on a hex battlefield, where you make tactical and strategic decisions, deploying troops, armour, air power and missiles as you see fit.

Behind the scenes: *Frontlines* is yet another Impressions PC conversion to the Amiga. It's just about finished on that machine, and should be with us by the end of February. As usual Impressions are making the effort to ensure that graphics, speed and gameplay are of the same standard as the PC version, but this probably means that it's going to be an AGA only game.

What's new: It's a bit of a departure for Impressions who, of late, have been concentrating on more RPG style world (and car) building escapades. This is much more of a *Battle Isle* style of game, and while campaign strategy is important it's the actual tactical fighting on the ground and dispersal of troops and weapons that are the salient points of *Frontlines* - hence the name of the game as the saying goes!



First Impressions:

We're very impressed with the graphics and level of detail involved in *Front Lines*. The game contains fully animated combat, 16 different types of military units including heavy armour, missiles, engineers, strike and recon aircraft and more. It's a turn based game (each one lasting approximately five minutes so you can imagine the level of decision making needed) and is ideal for two or more players. There is also a facility to that enables you to edit the type and strength of your

combat units and create new battle scenarios once you have finished the ones that already exist. More news next month.



The Chaos Engine 2 The Bitmap Brothers

The Gameplay: Guess what? It's the same as the *Chaos Engine*, nearly. The basic premise of one or



two players running around multiple levels shooting everything in sight and picking up power-ups and various score and game enhancing devices, while trying to avoid being shot or eaten, all in the name of saving the world from the evil machinations of the Baron and his infamous Chaos engine remains. This time however, four of the six characters have gone back in time to various locations where the Baron hopes to recover the parts of his lovely but destructive toy which were destroyed during part 1.

Behind the scenes:

It's the Bitmap Brothers again, with game design being carried out by Simon Knight and Eric Matthews, coding by Steve Cargill, Steve Kelly and Rob Trevelyan, graphics by Dan Malone and Gary Carr and SFX and music by Chris Maule. It's been in production for nearly two years now and is due for release, through Renegade, around mid April next year.

What's new: The intelligence routines and the new split screen two player mode. Rather than opting for the old single screen scenario, the Bitmaps have decided to introduce even more competition than ever by allowing both human players to operate independently and even kill each other. Single player mode remains the same as the original, except the computer player's intelligence is more developed.



First Impressions: Anything from the Bitmaps with *The Chaos Engine* as part of its title is going to excite folk in this office. The characters have improved animation and the new element of competition will probably mean that this game will be even more difficult but rewarding than the first. *Cannon Fodder* and *The Chaos Engine* are great shoot 'em ups of our time; we've already seen Sensi's *CF2* so roll on Bitmaps... we want more!

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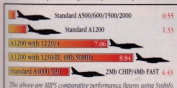
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The all new world of Lemmings

■ Price: £29.99 ■ Publisher: Psygnosis ☎ 051 709 5755

Rik Skews feels anything but suicidal after encountering the latest exploits of those lovable Lemmings.

Arriving early in 1991, nobody could have predicted the success of the original Amiga version of *Lemmings*.

It's on a par with *Tetris*, one of those few titles that can manage to appeal to those who would normally never play a computer game. Instead it appeals to just about everyone from mums to stressed-out businessmen. Indeed, in a manner reminiscent of those clued up people who rejected The Beatles, *Lemmings* was dismissed by many major software houses until Psygnosis wisely published it.

Developed by the then relatively unknown DMA Design, *Lemmings*, like many of the best software



▲ If a lemming is in no danger and on his way to the exit, use the fast forward icon to hurry things along.

titles ever, had an extremely simple concept. Guide a hapless band of lemmings from one side of the screen to the exit, making sure that in the process as few as possible perish in the traps that litter the play area.

To help them on their perilous journey a limited number of skills needed to be used in the best way possible. These skills included creating a builder lemming to build a bridge over dangers, and a blocker variety which stopped the flowing hordes walking to their doom.

Simple, but highly successful, the *Lemmings* titles have now been converted with equal success to many other formats. On the Amiga the original *Lemmings* has since been sequelled by *Christmas Lemmings*, *Lemmings 2* and most recently *Holiday Lemmings*, which was *Christmas Lemmings* with 32 new levels bolted on the end. All these titles followed the format of the original with the only major differences being the ability to choose from more skills, and in the case of *Lemmings 2*, a plot where the Lemmings were looking for 50 missing pieces of a lost talisman.



Surprises

Unsurprisingly then I was expecting more of the same from *The All New World of Lemmings* but I was pleasantly surprised at what I discovered. Gameplay is divided up neatly by three different tribes of lemmings, these being the classic variety as featured in the original game as well as Egyptian and Shadow types, the latter of which are Ninja wannabes. Some levels now feature trapped lemmings within them as well. It's not necessary to rescue them but this is of a good idea as they'll be added to your total lemmings supply. Baddies have been introduced too, though not in the end of level guardian sense. Instead they present more of a nuisance. Examples include the sexy Lemme Fatale who makes lemmings so excited they commit suicide, and the Psycho Buzzard which hovers the sky in certain levels before swooping down and picking out a target or two.

Aurally *The All New World of Lemmings* is



▲ Use the paws mode (ho ho) to look around a level and judge the dangers.

much the same, with the familiar 'Let's Go!' and 'splat' death sounds all accompanied by more of that wonderfully tacky supermarket music. The graphics though, have been radically overhauled. Gone is the 8-bit look of the backgrounds and platforms, instead everything now has a much more polished and modern look. However, the biggest change has been reserved for the lemmings themselves. No longer are they the small and weedy, Sensible Software style, now they're big, dumpy and bear more of a resemblance to babies than suicidal rodents. This increase in size has allowed DMA Design to inject more humour and personality into the lemmings by way of better animation and greater detail.

Radical overhaul

The user interface has been radically overhauled too. Gone is the myriad of different icons. Now there are just five



▲ No longer do you need to explode a blocker to let other lemmings pass, simply click on the walk icon and he'll return to normal.



▲ Each of the three lemming tribes incorporates 28 levels - pretty massive.



▲ Some levels have lemmings trapped within them. Rescue them and they'll be added to your total supply.



major icons from which all functions can be selected, which are as follows: walk, block, jump, use and drop. The 'use' icon allows the use of tools which can be collected in various parts of each level. These tools include spades for digging through earth, bricks for allowing passage across danger or to an otherwise unreachable area, and bombs for taking a satisfyingly hefty chunk out of the landscape. Each tool is limited in its capacity, the brick icon only contains a certain number of bricks for instance, and there's usually only enough to complete the task at hand, so if the tool is used at the wrong time it generally requires the level to be restarted.

Nearby tools might not be the one which will help the lemmings reach the end of a level safely though. Instead it could simply allow passage to another tool which will be the key to getting the critters to the exit. The use of each tool is also much simpler than was the case previously. For instance, if building a bridge, it's no longer necessary to click on the lemming each time you wish him to place a brick. Simply click on him once and he will become highlighted. An arrow appears and all that needs to be done is to point this arrow in the direction you wish him to build and away he'll go. To change the lemming's direction, simply select him again and move the arrow towards the way you want him to continue. One other noticeable change is the way blockers can now be turned back into normal walkers, rather than having to nuke them to allow others to pass. Who said computer games encouraged violence? Levels can be saved too, a Godsend as far as I'm concerned as after restarting a game in the original *Lemmings* I spent ages trying to work out whether that last letter in my hastily written down password was an S or 5!

Simply the best

I'd become bored with the whole *Lemmings* phenomenon about two years ago but *The All New World of Lemmings* rekindled my interest thanks to the new ideas it incorporates. For a start the lemmings themselves look much cuter in their dumpy guise and when



▲ Three tribes of lemmings await, classic, Egyptian and shadow (sinja wonnabers).



▲ Manual passwords are banished to be replaced by a handy save game option.

one gets splatted you can really get quite upset. And with three breeds of lemmings there's a lot more variety in the level designs, although it's a shame these individual tribes don't have different attributes. I have only two real complaints. Firstly the gameplay becomes seriously tough very, very quickly. If you're a *Lemmings* virgin I'd advise sticking with one of the earlier titles which feature a much smoother learning curve. It also seems something of a con to only incorporate three tribes when *Lemmings 2* had 12. OK so each of the tribes now has thirty levels, and Psygnosis has stated that other tribes will feature on future magazine coverdisks, but I bet some will turn up on expensive data disks too. Still, once people see this I wouldn't be surprised to see the whole *Lemmings* phenomenon pick up again and deservedly so because this game is definitely the best so far. ■

LEMMINGS 3

A500	workbench version.....1.3+
A500+	number of disks.....4
	RAM.....1Mb
	hard disk installable.....no
A600	graphics.....85%
A1200	sound.....81%
A1500	stability.....86%
	playability.....89%
A2000	OVERALL
A3000	The best
A4000	Lemming game
	so far.
	88%

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Shadow Fighter

■ Price: £2599 ■ Publisher: Gremlin Interactive ☎ 061 832 6633



Christmas, traditionally a time of peace and harmony, has been turned into a bloodbath by unscrupulous software houses. Alan Dykes reports from the scene ...



It's really heating up down here in the battle of the beat 'em ups. The best looking contender 'Pretty Boy' *Rise Of The Robots* was knocked out in the first round with duff playability, but the remaining two combatants, the son of last years' champion 'Mortal' *No Hype ...* honestly 'Kombat 2 and Shadow' *Italian Stallion* Fighter, a relatively unknown outsider from the land of pasta and parma ham are still in the running. Blood is everywhere, joysticks have been broken and the referee has been beaten up by a German cop and had his spine ripped out by a man with a mask. Oh it's terrible ...

A month or so ago Gremlin Interactive announced that they had signed up the fighting game of the year, and few believed them. Come on, how can you have the fighting game of the year and not tell anyone about it until it's almost on the shelves? If it's that good they'd want to hype it up a little. But the reason for this lack of hype is simple: Gremlin didn't know they were going to release it themselves until roughly November of last year. And they weren't telling fibs either - it is good.

The game has been designed and

programmed by an Italian team consisting of programmer Domenico Barba, graphic artist Fabio Capone and Fabio Ciccariello, the man responsible for its music and sound effects. They started work on it at the beginning of 1994, and it was some feat getting it all ready for release by Christmas - by the time you read this *Shadow Fighter* should have been on the shelves for two or three weeks - less than a year later

Playability

Looking at the screenshots you could be forgiven for thinking that this was an update of *Body Blows*, the scaling of the sprites and graphic backgrounds are similar, but the game itself is different, in as much as any beat 'em up could be 'different'. Not for *Shadow Fighter* the beautiful rendered graphics of *Rise* or the realistic sprites of *Mortal Kombat*, these are pure cartoon fighters, but the level of animation is good and the separately scrolling backgrounds are smooth, if a tad colourless. That said, you can fight in 16 different countries, so you're never short of variety in the background stakes.

There are three options available in the main



▲ In one of his easy to execute special moves Yurgen the German cop takes out his gun and shoots an opponent.

The Fighters

There are 18 fighting characters in *Shadow Fighter* and you can play any one of 16 of them in two-player mode, or one of six in single player vs computer mode. The two you can't play are Pupazz (see *Punch Bag Box*) the practice dummy and the *Shadow Fighter* himself, whom you can only get to fight by defeating 15 of the others.



SPECIAL MOVES

Every fighter has either four or five special moves, and in order to win against the computer or a human opponent you will need to master these. The manual gives a full list of the special moves but only tells you how to do two. The rest aren't hard to find though, provided you're used to beat 'em ups. Slam Dunk, the Danish basketball star's five are shown below.



The jumping basketball slam, a useful close quarters move, but leaves Slam Dunk vulnerable if unsuccessful.



The spinning fire kick, a powerful move with a range of about half a screen, can be defended against in a crouching position.



The speed attack is a shoulder ramming action that's fast and powerful. This is one of Slam's long range moves.



The fireball attack involves Slam throwing a flaming basketball, the longer the distance the easier it is to avoid though.



The head spring kick is a flaming overhead powerkick which is effective but difficult to do, and it can leave Slam vulnerable.



▲ Felix can conjure up a genie and create a whirlwind of sheets of flame. The genie moves have short range and medium effectiveness.



▲ With a swirl of the joystick and a quick fire button stab Salvador turns into a flaming lion. The move is not only pretty, it's effective.

menu as far as fighting is concerned: single player vs computer in championship mode, training which involves a single player Vs the practice dummy Pupazz, one player single battle against the computer or human vs human. In the championship fight you can select one of six lower level characters and then battle your way past the other 15, while in any of the other three modes you can pick whichever character you like and fight against any other – except for the Shadow Fighter himself, who is reserved only for those who deserve to fight him.

Variety

The first thing you'll notice on *Shadow Fighter's* box is the 2000AD inspired artwork, the second is the flash in the corner which claims there's 'an amazing 17 different fighters'. Jolly good, no fibs here either: there are 17 fighters and they are all amazingly different. The range of characters goes far beyond the standard *Streetsfighter*-inspired Ken and Ryu to include a fighting basketball player, a cop, a magic carpet riding Pakistani guru and a shape altering blob of T1000 type metal, not dissimilar in idea (but visually nothing like) the Supervisor in *Rise Of The Robots*.

Each character has a wide variety of standard blocking and hitting moves and up to five special moves. These range from the form morphing antics of Khrome, the flowing metal man to the rather Blanka like moves of Kury, the Tibetan monster. Special moves are carried out in the traditional joystick back-forward-fire style combination of sequential movements

and it is essential that they are learned. Each fighter will have one or two which are really easy to carry off and some of these enable long range attacks. None of the moves will take all of your opponent's power away but a well timed combination will finish him or her off pronto.

Although the manual claims are up to five special moves it doesn't tell you how to do all of them, and in the process of finding out you may find some other moves which look pretty special. Suffice to say that trying all possible joystick combinations will reap plentiful rewards.

I loved *Shadow Fighter* from the moment I first played it. The players' moves are fluid and the special moves aren't too difficult to discover and master. The game doesn't have as much hype surrounding it as *Mortal Kombat 2* and it looks more old fashioned in terms of its graphics, but it scores well on playability and on the number of fighters you get to play. If *MK2* hadn't been such a stunning conversion then *Shadow Fighter* would have walked all over it. As it stands we're divided over the two. In terms of the Amiga, *Shadow Fighter* is without doubt the best indigenous beat 'em up on it, but Ed Laurence who reviewed *MK2* for us is a console fanatic too and has got caught up in the sense of excitement that has generated – so there's no doubt that beat 'em up purists will agree with him.

For my money though, and hype aside, if you were a *Body Blows* fan then *Shadow Fighter* has got enough characters and impact to keep you playing for a long time – and Gremlin have promised an expansion that will include eight more fighters early next year. ■

● Name: Yarado
Country: Mexico
Specialty: Aztec Mysticism

● Name: Khrome
Country: Unknown
Specialty: T1000 Impressions

● Name: Top Knot
Country: Thailand
Specialty: Thai Boxing

● Name: Okura
Country: Japan
Specialty: Samurai Swordsman

● Name: Shadow Fighter
Country: Unknown
Specialty: Staying unknown

● Name: Salvador
Country: Spain
Specialty: Street Fighter

● Name: Kury
Country: Tibet
Specialty: Brute Force

● Name: Toshio
Country: Japan
Specialty: Ninja Martial Arts

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Punchbag practice

One of the really nice touches in *Shadow Fighter* is the provision of a training dummy to practice your moves against. Called Pupazz, he will defend himself vigorously with a variety of the most bizarre weapons, and a padded bag which jumps out of his stomach. Although he looks easy to defeat (he's so cute) when you make him mad he'll drop dynamite in your path, attack you with a saw on an extendable arm, or a flamethrower and, funniest of all, he'll try to hit you with a gigantic fist that pops out of his neck after his hinged head flies off. However, if you don't attack him, he when you're positioning yourself to practice a special move, he won't do anything to you.



▲ Here he is, Pupazz, made in Taiwan. Something so cute could never cause any problems, could it?

▲ Don't you believe it! Here's just one of his vicious moves, the extendable saw. Practice turns out to be not so easy.



◀ But he's just a dummy after all, and even that punch bag with the sad face on it can't save him from a Top Knot move.



◀ Once it's all over Pupazz comes out of the fight with a smile every time. If you intend to fight the computer Pupazz will really help.

Shadow Fighter

A500	workbench version.....	1.3+
	number of disks.....	4
A500+	RAM.....	1Mb
	hard disk installable.....	no

A600	graphics.....	87%
A1200	sound.....	85%
	stability.....	92%
A1500	playability.....	93%

OVERALL
More fighters
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Core Design have finally finished their Zelda-style adventure game. Tony Dillon has always been a bit of a 'game boy' so we let him play it.



Dragonstone

■ Price: £29.99 ■ Publisher: Core Design © 0332 297797

For years Nintendo owners have had the RPG edge with *Zelda*. In case you aren't familiar with this series of games, they are absolutely superb arcade adventures, viewed from above, that are so full of character and style that they have become world wide hits. The Amiga has never really had this kind of game before, and it has to be said that the market has been somewhat starved of it. So when Core Design stood up and announced that they were to release a game called *Darkstone*, originally thought to be the sequel to *Darkmere*, the Amiga world got ready for it. Then came the exclusive coverdisk on *CU Amiga Magazine*, and the game looked every bit as good as we had hoped. It had large, bright graphics, smooth scrolling, a simple but effective combat segment and puzzles galore. Nothing could go wrong.

Or could it? I'm afraid to say that *Dragonstone* has not turned out to be the digital prodigy we all hoped it would be. Sure, a high fifties score doesn't make it an awful game, but nowhere near what was



▲ A rather unattractive front porch if I say so myself.

expected. But before I launch into a full scale assault, let me talk you through what the game actually is.

You begin as a complete nobody; the classic Man With No Name. Stood in the forest with only your sword and an itchy head, you puzzle at the world around you. In no time at all you discover that you do have a quest – you are the one without memory of what has been

before, who has to head off to a distant island to slay a bunch of dragons who are taking over the land. It all sounds easy enough, but there is always more than meets the eye.

The game is viewed from above and behind the main character, almost exactly the same viewpoint as is seen in *The Chaos Engine*. In this view you run in all eight direc-



▲ Sounds saucy, I wonder what words I should utter to get my skin tingling.

tions, around a huge scrolling map, occasionally changing to a different map when you enter a building. All of the puzzles in the game are scattered around the map, so you spend quite a long time running from one spot to another, and then back again, ferrying items all the way. That is, of course, until you press the space bar.

Interaction mode

Then you enter into Interaction Mode, and this is where the heart of the puzzle solving happens. A window on screen will show you one of three things: a character, specific item or a general location shot. If it's a character, you have the choice of talking to them, or trying to use an object on them. If it's a specific item, you can use something else on it, like a rope on a hole, and as it's a general location shot, there isn't really much you can do. That's about it.

The only other part of the game to mention is the combat. As you can see from the screenshots, your sword is drawn at all times, and all you need to do is tap on the fire button to swing it in the direction you are facing. Holding down the fire button results in a harder hit. Holding it down until the power bar reaches the end leaves you firing a psychic bolt of energy in the direction you are facing. You have plenty of opportunity to upgrade your weapon as you go through





▲ **Deb what a nasty bug! - spitting out fireballs. Where's your table manners?**

the game, which simply speeds up the time it takes for the power bar to fill.

The game looks great, it must be said. The animation is smooth and flawless, and you are never left guessing as to where you can and can't walk, or what the objects are.

Too hard, too easy

The problem with the game, however, is the gameplay itself. It is both far too easy and far too difficult to be playable, and in the end you walk away feeling frustrated. The puzzles, for the first part, are far too easy. Most of them seem dependant on you having visited all the important locations on the map, so you end up knowing that if Character A wants an item that Character B has, all you need to do is see Character C and everything will be sorted out. The one time I did get stuck, trial and error sorted me out in no time at all.

The combat is far too tough, and that isn't because I'm crap with a joystick. The problem first arose on section 3 of the game - Mountain Impossible, where sand monsters rise out of the ground in front of you. The collision detection is very inaccurate, and I found it impossible to score a blow on anything that my sword connected with. If, however, I swung too early, leaving a five or six pixel gap between the end of my



sword and the thing I was trying to hit, I won the battle. This also worked the other way around, which meant I ended up getting stuck in corners, getting the stuff knocked out of me because, for some reason, you can't move your sword when you're being attacked.

That said, it is quite an engaging game, and parts of it really enjoyed. However, those parts were far outweighed by the number of times I slammed the joystick down in frustration, and with that in mind I really can't recommend it. ■

DRAGONSTONE

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OVERALL

A great idea, but let down by poor gameplay at times.

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Which computer(s), if any, do you own?

Overlord

■ Price: £29.99 ■ Publisher: Virgin ☎ 081 960 2255

Achtung, baby!
Rik Skews swops
lead with the
Hun courtesy of
Rowan's latest
flight sim.

If there's one area where the Amiga has fallen behind in compared to the evil PC it has to be the flight sim genre. Developers Rowan are doing their best to change that however, with a string of quality titles. First off was the decent *Reach for the Skies* which has recently been released on budget for £14.99. Next up was *Dawn Patrol*, a conversion of the brilliant PC original and which you may have seen previewed in *CU Amiga Magazine* last month. Right now though it's *Overlord*, which unusually for a flight sim has floppy and hard disk access times kept to a minimum.

D-Day landings

Taking place around *Operation Overlord*, the complex series of missions leading up to and including the D Day landings in 1944, *Overlord* offers the player a choice of three planes to swoop about in and pump the enemy full of lead with. The famous Spitfire is the plane for the combat connoisseur thanks to its unrivalled close combat fighting abilities. The other two aircraft on offer are the Mustang, which with its larger fuel capacity is useful for long range missions, and the Typhoon. The Typhoon is used



▲ Even in full detail and 32 colour mode turning is beautifully smooth.

more as a bomber than a fighter and comes equipped with rockets, handy for taking out ground based enemies such as ships and trains.

Numerous missions are available; escort, bombing and interception being typical examples. Mission parameters can be altered so if one has already been completed and you wish to play it again, it's possible to alter the number of enemy planes that you'll encounter, at what height and so on. These options take place against some highly detailed backdrops which make a change from the boring presentation screens common to many flight sim games. This helps add to the atmosphere no end. The player's bedroom which acts as a pause screen is faithfully recreated in period style for instance, and is preferable to staring at a dull paused message. Some people might find these pictures irritating though, as it involves moving the mouse around the screen and discovering which filing cabinets represent which sections of the game.

Overlord is definitely more of an arcade game than flight simulation, and despite all the dials whizzing round in the cockpit it's safe to ignore all but the really important ones, like the plane's height and how much ammunition is left. Taking off and landing are optional too and there's an accelerated time mode for fast-forwarding through the quiet bits, as well as a super

engine for making stalls almost non-existent and out-maneuvring the enemy a lot easier.

No shading

Graphically the game is competent. The still screens in particular are excellent, but if you're familiar with the PC version expect to be disappointed as the Amiga game lacks the power-sucking Gouraud shaded planes and graduated skyline loveliness. Thankfully the planes are not completely bare but are marked with clear insignia, so there's no danger of shooting down your mates Ginger and Taffy in the heat of battle.

Numerous external views are selectable, and these can be zoomed in and out to your heart's content until an ideal view is found. *Overlord* also features a 'revolutionary' inside combat lock view. This scrolls the viewing window to continually focus on an enemy, mimicking real life where the pilot turns his head to keep track of a target. The direction that the plane is flying in is represented by an arrow. Sound is disappointing however, with corny music and raspy FX, especially the engine noise. Still I'm not really concerned about the audio visuals as long as the game plays well and in that area *Overlord* holds up quite well.

Of course I wasn't there at the time, but the game conveys what I believe to be a good sense of



▲ A number of outside views are available and these can be zoomed in and out of to your heart's content.

realism and plenty of attention to detail, with many of the proceedings recreated as they actually happened. *Overlord*'s problem though, is that it ends up trying to pander to the tastes of both arcade and strategy fan, and ends up not being that engaging for either. A plane-based game should either be the tree destroying manual overload of a Microprose product or an all out blast like *Embryo*. It's also very similar in places to Rowan's earlier *Reach for the Skies*, and considering that title has just been released on budget and offers more planes to fly, I reckon you'd be better off with that. ■



▲ Check out the different capabilities of the planes on offer before you select one.

OVERLORD

workbench version.....	3.0+
number of disks.....	4
RAM.....	2Mb
hard disk installable.....	yes
graphics.....	83%
sound.....	58%
stability.....	78%
playability.....	78%

OVERALL

Quite good but *Reach for the Skies* was better

76 %



▲ Although many of the missions require you to either protect an escort or take down enemy planes there are some ground-based scenarios too.

BREAKING AWAY FROM THE FLEET

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Impressions

Kick off 3

European Challenge

■ Price: £29.99 ■ Publisher: Anco © 0322 292513

Rik Skews mysteriously finds an envelope stuffed full of Kick Off 3 European Challenge disks in a motorway cafe and shuffles away for a closer look.

It's hard to believe football games were once something of a rarity, good ones even more so. Released over four years ago now, Anco's original *Kick Off* changed that, and proved it was possible to put together a decent footy game which not only bore a resemblance to the real

thing, but played well thanks to an intuitive control method.

This was followed by *Kick Off 2*, and is still reckoned by some to be the definitive footy title, both games created by Dino Dini and Steve Screech. The dream team was split up mid way through last year though, when Dini left for Virgin where he has since created *Goal!* for the Amiga, and more recently *Dino Dini's Soccer* for the consoles, both of which were well received by reviewers and the public alike.

This left Steve Screech to crack on with *Kick Off 3* which was originally released four months ago. Taking a gamble, Anco abandoned the revolutionary top-down view in favour of a side-on TV-style horizontally scrolling view. Sadly *Kick Off 3* was merely an average title, not living up to the pedigree its predecessors had created. Apart from anything else, one of the main complaints was that the game was unplayable without a two-button joystick, which meant that unless you owned either a Mega Drive or CD32 controller, the game was no go.

Flaws are gone

Kick Off 3 European Challenge aims to iron out the original flaws and introduce new features. It's now possible to use a standard one button joystick for instance. Most of the menu options are the same though, giving you the option to change everything from in-game tactics to game speed. The choice of game speed is important, as this varies the amount of control you have over the ball, from glue-foot at the slowest speed to almost zero at



▲ Well detailed crowds litter the stands. It's a shame they're not animated though.

the fastest. Matches can either be friendlies, part of a league programme or the Euro '96 qualifying campaign, as opposed to the 1994 World Cup offered by *Kick Off 3*. Many of the greatest world and league teams are represented, but sadly the player's names are mis-spelled to avoid legal repercussions. As a football fan, that's something I found rather irritating, though to be fair there is an option to edit the names. It's difficult to fault *Kick Off 3 European Challenge*'s options as they are amongst the most comprehensive around, in a soccer game or otherwise.

Is it any better?

As before though, once in to the actual game, disappointment begins to seep out of the monitor. One of the most obvious changes is the improved audio, but to be honest it still sounds poor. It would seem as though only small samples have been used because the stadium rumble continuously loops, while scoring a goal results in some amusingly high pitched chants that sound more like a car changing gear than a celebratory roar. Graphically it's more polished though, with smoother scrolling



▲ Use the star rating system to select the best squad possible and make sure there's a couple of playmakers in there as these guys can be match winners.

backgrounds and improved animation on the players, although they're still not in the same league as FIFA's devilishly sexy player sprites.

These cosmetic touch ups have made little difference to the game-play though. From watching the pre-match kickabout it's clear the players have a wide range of moves available to them. It's a real shame then that the only one that can be pulled off by anything other than complete fluke is a 50 yard punt on goal. Controlling the players is definitely easier with a one button stick than the original joy-pad option, but again pulling off the move you want is too difficult. And this is *Kick Off 3 European Challenge*'s main failing. Control is the most important factor in a soccer game, and this one has too little of it. It still feels sluggish and unresponsive, even when the fastest speed is selected.

Kick Off 3 European Challenge is not a bad game, just average, and with the likes of *Sensible World of Soccer* around it hardly warrants purchase.

It's a shame really, because there's the makings of a good football game here, and compared to the similar looking *FIFA Soccer* I felt more in control of the proceedings. Perhaps a *Kick Off 4* will manage to blend more successfully the realistic perspective that this game offers and combine it with the classic gameplay of its top-down predecessors. ■



▲ Use the replay function to relive those magical back of the net moments.



▲ Injuries can happen quite easily but thankfully there's an option to turn them off.



▲ If things aren't going to plan change the team orders to suit the style required. 'Set stuck in' is a great way of taking out opposition star players for instance!

KICK OFF 3 EUROPEAN CHALLENGE

- workbench version.....3
- number of disks.....3
- RAM.....2MB
- hard disk installable.....no

	graphics.....88%
A1280	sound.....60%
	stability.....68%
	playability.....70%

OVERALL
If only it played
and sounded as
good as it looks.

71%

A4000

Base Jumpers

■ Price: £29.99 ■ Publisher: Rasputin Software ☎ 01689 850770

He's a few biscuits short of a family assortment, but even Rik Skews wouldn't consider leaping off buildings like the characters in Rasputin's bizarre base jumping game.



▲ The jumping section is great fun. Ram your opponents into obstacles but take care not to fly into any yourself.

For the uninitiated, base jumping is a sport for people who wouldn't be nutters. It simply involves leaping off something tall, usually a building or bridge, and pulling the parachute ripcord at the last possible moment to avoid a hideously messy death. The base jumpers of the game's title

are representatives from a rock hard fighting organisation who like to base jump in recreational time in order to keep their adrenaline levels topped up.

Gameplay is divided up into two distinct areas. Firstly the building, or whatever, must be climbed as quickly as possible as the player is racing against the times of three other competitors. Reach the top first and a hefty points bonus is awarded. It's not that simple however, as numerous *Lemmings*-like hazards attempt to slow the player down. These include roving security guards, simple puzzles, explosions and walls which have to be smashed through. Baddies can be dispensed with in the time

honoured manner of leaping on their heads and doing so results in a letter being released. Collect these in the right order and a number of three letter words can be formed, such as MAC. Forming these words usually results in a bonus, though some can be nasty and cause an anti-bonus, like the reversal of the player's controls.

On reaching the top of the level, the game switches to the players' earthbound descent. All four jumpers are shown here and in multiplayer mode can be controlled via a parallel interface (available from specialist computer shops and which you might even have if you bought *Dynablast*). This is definitely the most fun part of the game, as opposition players can be rammed into body-splitting obstacles during the descent. As well as ramming opponents, the obstacles have to be avoided by yourself and

the best time to open the parachute has to be judged, as big points are awarded for landing first. Open it too late and your man will splat into the ground. Opening it too early will result in the player slowing down and landing last.

It's worthwhile getting some friends together because the computer players are usually happy to drift down avoiding the obstacles and ignoring you. There's no denying that *Base Jumpers*' sick sense of humour is appealing, but its lack of gameplay variety and basic audiovisual presentation means that its £29.99 asking price is too high. At a more reasonable price I would have no hesitation in recommending it, but as it stands I'd advise you wait for a budget re-release. ■

Base Jumper

A500	workbench version.....1.3
A500+	number of disks.....1
A600	RAM.....1Mb
A600	hard disk installable.....no
A1200	graphics.....71%
A1200	sound.....68%
A1500	playability.....72%
A1500	playability.....70%
A2800	OVERALL
A3000	This could have been something really special.
A4000	70%

RoadKill

■ Price: £25.99 ■ Publisher: Add Software ☎ 0302 890000

Hedgehogs, rabbits, pheasants, the odd sheep or two. All tarmac and tyre fodder. Alan Dykes hits the road ...



▲ Teenages he makes it in record time. Can he make it over to the bonus jump? The crowd goes wild with excitement.

If the CD32 ate Hovis loaves then *RoadKill* would be the next best thing, or so we reckoned last month, but just in case you A1200 types

don't believe us, here's your version. Three disks' worth of racing madness without the violent rendered intro, but with just as much fun and great sound.

Somewhere, somehow a race called the Roadkill Challenge has been set up and there's lots of cash at stake. You choose one of six

drivers, with names like Hammer, Slam and Cannon (they probably work part-time for *Gladiators*) and participate in four races, each of which has four individual tracks.

The tracks are viewed from an

overhead perspective and are littered with icons like money bonuses, extra armour, tyre traction and missiles. The aim of the game isn't just to be first around the track – although that is still the general idea and you need to get into the top three places to qualify for the next race – you get maximum cash and bonuses by killing as many opponents as possible. This can be done by forcing them into walls and spikes or shooting them with guided and unguided missiles.

Along the way you have to look out for mines, cannons and other cars which in early levels will try to knock you off the road and in later levels will start shooting missiles too. The tracks are not too cluttered but can be difficult

negotiate, even though the presence of a positioning radar makes things a bit easier.

And as each level brings in new perils and weapons it all starts adding up to a busy and satisfying game, while the sound is just superb too. Metal music introduces the game and continues throughout, while killing opponents, scoring points and picking up power-ups invite wild maniacal shouts which really get the adrenaline pumping.

If you want a brilliant cross between a racing game and a shoot 'em up then buy *RoadKill*. ■

RoadKill

A500	workbench version.....3+
A500+	number of disks.....1
A600	RAM.....2Mb
A600	hard disk installable.....yes
A1200	graphics.....86%
A1200	sound.....86%
A1500	playability.....85%
A1500	playability.....84%
A2800	OVERALL
A3000	The best racing game in ages.
A4000	85%

Shaq Fu

■ Price: £25.99 ■ Publisher: Ocean ☎ 061 832 6633

A beat 'em up starring a basketball superstar? That doesn't quite figure, so we sent in the dumpy legged Rik Skews to investigate.

When someone weighing 300lbs and is over seven feet tall decides to be in a beat 'em up you'd think twice before telling them to go away. But when that person is Shaquille O'Neil, arguably the most successful sportsman of all time with a salary that would make the £18 million lottery winner jealous, you'd be committing financial suicide not to sign him up, however ridiculous the premise.

Developed by Delphine, a company well known by Amiga owners for the excellent *Another World* and *Flashback*, their distinctive graphical touch is obvious from the start as the sprites are equally well animated and dynamic. The

plot is not so polished however, and takes into account just about every beat 'em up cliché imaginable. It takes place long ago in The Second World, a miserable land ruled over by the heartless Sett Ra. Not content with ruling The Second World he wants to get his gnarly fingers round that sticky bun called The First World, better known to you and I as Earth. Of course only the Chosen One can stop him doing so, and unsurprisingly this is Shaq Fu.

Into the game then and one of three play modes is available. Story mode casts the player as Shaq Fu, who must wander across the game map battling each of Sett Ra's cronies in turn, while

Duel allows any of the characters to be pitted against each other in either a one or two player match. Finally there's the tournament option, similar to that seen in *Ultimate Body Blows*, where each player assembles a team of fighters before sending them in against the opposition one at a time. Whoever has the most surviving fighters at the end of a battle wins. So, the presentation is good, with comprehensive options, and the graphics are equally polished. Why the low mark then? For starters, abominable disk accessing. Arriving on six disks *Shaq Fu* takes an age to load, and that's just to get to the title screen. Once the characters have been selected, up to four more disk swaps are required and unbelievably if you lose and decide to play the



▲ In story mode Shaq wears out his expensive pair of trainers by traversing this RPG style map to each of the different encounters.

match again, the whole set up must be reloaded as it isn't kept in memory.

Air freshener

And while the sprites are detailed and well animated they are wholly unsuited to the beat 'em up genre because of their small size. Letting loose with an explosive fireball for example should look exciting, instead it looks more like a spray of air freshener. And sometimes in close combat it can become very difficult to sort out what's going on. This leads to pointless random stabbing of the joystick button as you try to bash down an opponent's energy bar before they do the same to you – not a good way for developing skill or strategy.

Shaq Fu also suffers from many of the characters having just one move which will destroy an opponent with little effort. Shaq himself has a nifty throw which does just that and the other character most likely to be selected, Beast, has a claw attack which does the same. The unresponsive controls also lead to simple moves being used most often as the special ones are too difficult to pull off. Although many of the character's moves are hidden, if you've played *Streetfighter 2* or either of the *Mortal Kombat* games most of them will be worked out quickly. Not only have the moves been

seen before their execution has too, fireballs, dragon punches and overhead throws are common.

Downfalls

Shaq Fu is not a product that can be recommended. Although disk swapping is a problem, the insipid and completely uninspired gameplay that's been too accurately converted from the equally unimpressive Mega Drive and SNES originals is the major flaw. It's important for the Amiga to get big name console conversions like *Aladdin*, but this is one title that should have stayed on cartridge ROMs. The Amiga used to have little in the way of decent beat 'em ups but not anymore, so stick to Acclaim's classic *Mortal Kombat 2* or the forthcoming *Shadow Fighter* from Gremlin Interactive. ■



▲ Hit an opponent enough times and he becomes furious and starts to look out wildly and carelessly. Use this to your advantage.



▲ This is the major enemy, Sett Ra and the guy Shaq Fu is aiming to stop. Oooh doesn't he look scary? Not.

Shaq Fu

A500	workbench version.....1.3 and up
A500 +	number of disks.....6
	RAM.....1MB
	hard disk installable.....no
A600	graphics.....81%
A1200	sound.....73%
A1500	stability.....49%
	playability.....46%
A2000	OVERALL
A3000	Nice animation.
A4000	Terrible gameplay. Pity.

48%

ESP Sports Management



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VERSION 5

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The magic of horse racing is unlocked with the simple instructions, user friendly program and top class technical support. It is the best Open National Tipping Competition (1991) organized by Racecast this programs predictions came 2nd out of thousands of entries which led to a serious approach from a well known bookmaker, request for a copy of supporting the public. • A wide range of built in statistics make taking a race a quick and easy job, compared to other available systems. • To keep the program constantly up to date monthly updates are recommended. If the general program guide lines fail to break even we will have updates to all entitled purchasers. From range from £25 to £40 depending the length of subscription undertaken. • Specific details on some races to follow, as recommended by a variety of inside sources is provided with each monthly update. • There's a bonus review in the press and under a variety of scouting conditions. All were very positive about the programs ability to perform well and a full summary of the developers results from month meetings since January 1992 is available upon request.

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- Based on 8 adjustable players.
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STATISTICS

- Scorecard & bowling analysis.
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- Wagon Ball.
- Allocation Chart.



VARIABLE CONDITIONS

- Surface and pace of pitch.
- Day, night, cloud cover, temperature and humidity.

ANIMATED ACTION

- Sound Commentary.
- Graphic replays.
- All the strokes cut, pull, drive, etc.
- Bounce, dropped balls, run outs.
- Bowlers, wickets and no balls.

Managers 1 to 4 Human players. Performance statistics. Manager of the month/season. Pick any team in any division to start with. Automated features to make the game as easy or hard as you like.

League & Cup 1 Premier 22 teams, Division 1, 2 & 3 have 24 teams, Playoffs, Totters 1 Cup competitions with precise rules (2 legs, extra time, away goal rule, awarded draws, European Cup tables, 5 sides, non domestic league situations etc.)

Games 1 Weekly fixture/preview list. Week fixtures/results. Results from previous meeting with opponent a plethora of statistics.

Players Real life statistics for 94,953 season, updated monthly. Real positions, height, age, live transfer market. Contract & wage negotiations. Preferred foot (left/right/left). Goals, injuries, Training. Special talents, Injuries, Goodkeepers (approx 1st category). Defenders, Midfielders, Attackers & Utility. Retirements, Foreign transfers, Unhappy players, Top 10 Hot shot.

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Other 1 Full back (top, bottom, scores). Over 20 options to set arena game preferences. User friendly throughout with an excellent instruction book. Personal match reports if required. **SCOTTISH, ITALIAN & GERMAN VERSION 5's** coming soon.

Editors Allow you to amend scores, items in word games. Optional Extras.

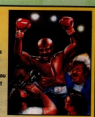
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BOXING MASTERS

A fabulous game which concentrates on the management of up to 3 Heavyweight boxers. It's quite different to most other management style games since it has a high proportion of interaction with computer controlled human personalities. In negotiations with other managers, boxer contracts, staff recruitment and publicity events. There are many other conventional tasks for the manager like scouting for new boxers, finance, training and even fight tactics are part of your responsibility; using full arcade action you can participate in your boxers' performances inside the ring itself or, if you prefer, direct them from the ringside. Two player mode available. Sporting graphics are used throughout the game & full details on the games major aspects follows:-

- The game has 100 ranked boxers with fourteen down attributes, retirements on age and injury.
- Negotiate fight deals with twenty other boxing managers, arranging the size of the purse, the venue and the date etc.
- Choose any one of two publicity events to pull in the crowds to your fights: press conferences, television, public trials etc.
- You can appoint and fire a scout, physio, cornerman and a trainer. Training methods include punching, speedwork, weights, shadowing and sparring.
- Your boxers can fight for World, European or National titles with mandatory defence. • The boxers performance in the ring is shown very graphically.
- A variety of tactics can be utilized during a fight: a punch to the head, the body, inside and outside winning tactics.
- Often ringside judges each have their own individualised accounts which are shown on the screen as the fight unfolds so that you can measure your boxer's performance. The reality of the fight is increased even more by the powerful sound effects of the crowd's presence and the noise of the punches making contact.
- A wealth of statistical data which can be viewed and printed and should cover every detail. • Local and save facility. • Comprehensive instruction book.



Formula 1 Challenge

VERSION 4.5

This motor racing simulation is an incredibly addictive game for 1 to 4 players that has been developed over a period of years by true fans of the sport. You start the game with just one car & driver with the aim of building your team to win the drivers and constructors championships. All circuits, drivers, teams, car graphics, rules, engines etc., are accurate for the 1994 season and can be updated. Excellent presentation with full sounds effects. The sensational world of Formula One awaits.

- Watch races as they unfold, three levels of highlights.
- Coches, spins, pile ups, car follows, stop/go penalties.
- Weather changes, fastest & recent laps, make pit-stops.
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Mortal Kombat 2



Price: £29.99 Publisher: Acclaim © 071 344 5000

Let's face it, lovely though the Amiga may be, it's the consoles that steal all the limelight when it comes to games. When was the last time the tabloids printed a picture of a trusty A1200 with the caption "Ban this instrument of Satan now"? Well now all the joys of media persecution are set to hit the Commodore market thanks to the arrival of Acclaim's latest headline-grabbing gorefest *Mortal Kombat 2*. Sure, this isn't the first conversion of the title, but it's definitely the closest to the plasma-drenched coin-op so far. But before everyone starts getting all excited, true believers, let's take a little time out to explore the fascinating history of this moral majority-infuriating social phenomenon ...

It all began a couple of years ago when Ed Boon, that rarest of beasts (an American with a sense of irony) surveyed the coin-op market in which he was (and still is) firmly entrenched. *Streetfighter 2* had seemingly revolutionised arcades by introducing heroes of cheaply produced and mostly unplayable clones. Ed - we'll be familiar here, he's probably a nice guy - saw a gap in the market for a game with a sense of humour. But not your average Les Dennis comedy slippers type, more the warped



▲ Another painful-looking martial arts escapade reaches its ultimate conclusion here with one of the characters receiving a bit of a kick to the groin.

pop-culture Bruce Lee-fan humour prevalent in today's youth (that one's for sociology fans).

From this tiny acorn the *Mortal Kombat* oak was grown, and within a few months, after an abortive attempt at signing Jean-Claude Van Damme in the lead 'role', the first *Mortal Kombat* game was ready for shipping. It was a bit crap, to be honest, but lots and lots of people liked its subtle blend of murder and mutilation, and pretty soon Ed and his pal John Tobias were back in the labs working on a sequel. This time, with the help of feedback from

hardened *MK* vets, the gameplay balance was perfectly adjusted and *MK2* went on to justifiably smash the profits set by the original, and ensure itself a revered place in not just the kooky world of games but also in the still kookier outside world, winding up all non-participants.

Probe's conversions of both games to all platforms, coupled with Acclaim's praiseworthy ad campaign(s) ensured a permanent place in the pixel lexicon right up to this latest stage in interactive evolution, the much anticipated Amiga version.

End of lecture

Right that's the lecture out of the way, now for the game. First off, if you haven't got a second floppy drive for your Amiga be prepared to get one, or else you're in for a fair amount of disk swapping. Second off, if you've got a weak heart *Mortal Kombat 2* could very possibly be the death of you. The graphics are stunning, better than those on the Super Nintendo version any day (and this is coming from a predominantly console journo). The sprites are the right size (very large) and the animation is as fluid as you could possibly hope for.

All the characters have made it into the final cut too, so there's no worries about selecting your favourite. Nor, indeed, are there any worries about fighting your favourite opponents; all three secret hidden scrap merchants are present and correct and waiting to be found. Before you ask, no you



▲ The blood splatters all over the show here.



▲ What a nice picture. Whip, kick, bleed, slice.



▲ Shang gives Reptor a friendly airplane ride.



▲ It's all much/mortal warrior action here.



▲ Shang punches a thunder god on the nose.



can't control them and no, Goro isn't one of them (although he's in the *Mortal Kombat 3* coin-op out next year, along with Kano and Sonya who also aren't in *Mortal 2*).

Now you can say all you like about the importance of playability, but if Probe had dropped half the player characters, people's negative reaction would be nowhere near as enraged as if the gore level were dimmed. Luckily for everyone concerned *Mortal Kombat 2* is still the most claret-thirsty videogame ever to have graced the industry. Every last drop of rhesus negative has been lovingly reproduced, along with the famously gut-wrenching Fatalities, the only conceivable motivation for memorising long strings of joystick commands.

Nose tweaking

If you're not psychotically inclined, the appearance of Friendships and Babalties may be more up your street. Babalties allow you to transform your opponent into a helpless babe-in-arms, with Baraka looking especially cute (if you're

into fangs).

Friendships, though, are the real stars of *Mortal 2*. Invented as another ironic device to thumb the mighty *Mortal* nose at technophobic agitators and scapegoaters, Friendships see the two foes settle their differences amicably with the presentation of a cake, a little disco dance, an autographed portrait or even a swift introduction to the family, depending on which character you're playing.

If you yourself are a bit of a conscientious objector, right now you're probably thinking "Is this all there is to it? Just senseless violence, gore and mickey-taking? What about art?" Well hold that sentiment right there hep cats, for *Mortal Kombat 2* isn't just the most notorious game in the world. It's also one of the most diligently crafted. There's no way you can win a single round with the old repeated-flying-kick tactic, it takes skill and at least a working knowledge of your character's capabilities. Amiga *Mortal Kombat 2* is the hardest version yet, harder than the original in fact, and this may be off-putting to less experienced players (younger ones shouldn't be playing it anyway – it's 15 rated). But stick with it, or practice against a dummy opponent in two-player mode, and you'll soon reap results. The satisfaction gained from whupping your third or fourth opponent and knowing exactly how you did it is surprisingly great.

Mild mannered janitor

It might sound a bit sad but this game really does inspire a minor level of fanaticism in even the most mild-mannered of players. Soon



▲ The pictures above demonstrate just a couple of the many and varied special moves on offer in *Mortal Kombat 2*. You'd better get used to them or you won't get past the first opponent.

your friends will be asking you to explain your strange new vocabulary of phrases like "four-hit dizzy reversal combo" and suchlike, and you won't even care. In fact, you'll probably just demonstrate the (supposedly unblockable) string of attacks in question and then sit back with a smug grin on your face as your pals wrestle each other for the joystick.

This version is bound to let loose the green-eyed monster upon the console community and keep Amiga-owners happy forever (nearly). It doesn't matter what sort of thing you're normally into, it doesn't matter if you've never played an arcade game in your life, it doesn't matter if your collection consists solely of text-only RPGs, every person who owns an Amiga has to own *Mortal Kombat 2*. In terms of revitalising the Amiga market this is far more important than any Commodore buy-out could ever be.

If this all sounds a bit feverish and raving it's because, to put it bluntly, it is. *Mortal Kombat 2* really is that good. ■



▲ Seeing a creepy shower of blood, Jax changes his mind about fighting it out with Baraka.



▲ Jax, in the manner of someone just let out for the day, decides to have a fight with himself.



▲ As, indeed, does Liu Kang. As the song goes, People Are Strange.



As you may have noticed, standard Amiga joysticks are rather lacking

in their button capacities (thanks to ancient Atari standardisation) when compared to their arcade and console counterparts. Obviously this makes it a bit harder to get used to controlling your kombatant unless you're blessed with a multi-button job. All the special moves are very much in, but they're performed in very slightly different ways, which actually make them easier to pull off than they were previously. If you're a real fiend for the arcade machine you may require a little control orientation, but once you've read the instructions through this shouldn't pose any real difficulties.



MORTAL KOMBAT 2

workbench version	2.8 +
number of disks	3
RAM	1Mb
hard disk installable	no

A500	graphics	96%
A1200	sound	93%
A1500	instability	94%
	playability	96%

A2800	OVERALL	95%
A3800	The best conversion on any system.	
A4000		

Players' Guide

Mortal Kombat II



So, you like the look of all this *Mortal Kombat 2* business but, not being much of a slacker, you've never really got any practice in down your local arcade. Well, don't worry, because CU Amiga Magazine has come to the rescue with all the low-down you need on those kooky Kombaters ...

Jax



The best all-round character in the game, Jax is a firm favourite with *Mortal Kombat 2* experts.

Although he's not quite as nimble on his feet as other characters, he's well equipped in the special moves department, with both ranged and close-to attacks for all occasions. Don't bother trying to use his Earthquake Punch until you've mastered a couple of combos, whereupon you can safely slip the attack in without your opponent being able to jump out of its effects in time. If you pick Jax, don't bother hanging back on the defensive as he's too cumbersome, just waste straight in and attack.

Liu Kang



Second only to Jax in the ace-ness stakes, Liu Kang is fast and manoeuvrable. His fireball-throwing prowess is probably his greatest asset. If you get the

timing right it's a piece of cake to pin a foe against the opposite wall and fling high, low and mid-height plasma bolts over in an almost inescapable sequence. Liu Kang's Bicycle Kick is also very useful and inflicts a massive amount of damage if it isn't blocked. However, if it is blocked Liu Kang is left wide open to an easy combo from his beleaguered opposite.

If you've got to reach the other side of the screen in a hurry, try his Flying Kick of death instead, which isn't so devastating in terms of either damage or defensive disadvantage.

Mileena



Third only to Jax and Liu Kang for sheer brilliance, Mileena is the most misleading character in the game. Her special moves look somewhat feeble, it's true, but once you learn

the right way to put them all together they're devastating. Mileena's Teleport Kick works nearly every time and her Sai Toss is the fastest-moving ranged attack in the game, which means she's still able to defend reasonably well when in projectile combat. True experts, however, swear by the Roll Attack, which can score three or four hits if you're skillful enough.

Kitana



Kitana's fan attacks require careful timing to succeed, but once they hit home the unlucky recipient is in for complete doom. The Square Wave Punch is the

easiest to pull off and a tactically useful technique, which pins unprepared opponents and opens them up for another attack – the Fan Lift or a point-blank Fan Toss are the best options here. Caution is advised when attempting along-range Fan Toss, as it's easy to see it coming (and therefore easy to dodge) and leaves Kitana completely defenceless for a couple of seconds – a long time in *Mortal Kombat 2*.

Shang Tsung



Shang's only special move of his own is the Skull Bolt, which, depending on the power of the attack, launches one to three flaming cranial projectiles in the

direction of some poor unfortunate. Defensively it's impossible to tell how many bolts are on the way, so it's best to keep blocking until Shang moves if you're playing against him. If you're playing as Shang Tsung yourself, make sure you learn how to perform every special move with every character so you're never unequipped in battle (especially if you accidentally morph into the wrong character – d'oh!).



Baraka



A face-eating mutant from an alien world, Baraka is probably the coolest character in the game if not the best. You may think that having two three-foot blades protruding from your forearms might be something of an advantage in single combat, but not for the Barakster. Each of the special moves which utilise these

weapons are very slow, from the reasonably sedate Blade Swipe to the stupidly lengthy Blade Fury, a slicing and dicing move which, if uncountered, causes a massive amount of damage.

Despite Baraka's Blue Spark projectile attack it's best to keep him out of long-range combat and stay up close.

Reptile



Scorpion is the proud owner of what is quite simply the most irritating special attack ever found in any game ever, his Orb. It seems so easy to dodge, and yet

it always creeps up on you, floating slowly around the screen until it eventually wallops you. If you're playing as Scorpion you'll find this a



▲ Oh I do like to use a nice kick to the stomach to fish people off – so refreshing.



▲ Or even this little number, which can set your opponent back a few light years.

handy technique, although the rest of Scorpion's arsenal leaves something to be desired. Make sure you practice your invisibility routines or you'll get badly hammered.



▲ Oh you and it's a flying foot in the face if you're not too careful. Heiii – yo.

Johnny Cage



The nearest *Mortal Kombat* equivalent to the indomitable Ken or Ryu, Johnny is a proficient but uninspiring character. His Shadow Punch (a

by any other name) is a useful move, but its wide angle and great height means it's a piece of cake to counter. The Shadow Kick is a bit more like it, although it floors opponents which makes it useless for combos. Johnny also has a couple of ranged attacks, but their curved trajectory makes it tricky to aim them in the heat of a scrap. Still, his blows do cause significant damage when they connect.

Scorpion



The Van Damme Spear made this chap one of the most popular characters in *Mortal* mythlore, but now Scorpion's been revamped he's considerably more dangerous. The spear is still a great starting point for a combo, especially when combined with the formidable Scissors Kick.

Scorpion's Decoy and Air Throw moves are great for defence. Counter late-attack combos with the throw and confuse projectile-lobbing foes with the flying Decoy punch, then use the spear to reel the target back in once they get on their feet again. Crafty eh?



Sub-Zero



Everyone likes Sub-Zero because of his infamous decapitation death move, but his in-game specials are actually quite feeble. The projectile-deflecting

Freeze blast ups the defensive ante, and it's always useful for a free hit occasionally, but that's about all he has. The Slide Kick leaves Sub and his opponent in too close proximity – and by the time Sub-Zero gets up, so has the other character. The Ground Freeze special could be useful, but it's just too difficult to time or aim correctly to be relied upon.



▲ Enough to chill any beast's heart. Such it makes my eyes water.

Rayden



Despite an impressive array of moves, Rayden is comparatively one of the weakest characters in the game. All his attacks are easily blocked, especially the

suicidal Torpedo headbutt.



▲ Bit of a graceful move there as you reduce your opponent to a jibbering wreck.

Rayden's Super Shocker is an excellent close-quarters attack, but as with most moves of this kind, if you don't get it exactly right Rayden is left powerless to stop an incoming fist. Best technique to use is to rely on your Teleporting abilities to keep you out of trouble – although don't teleport when you're already out of trouble or you'll end up right in the thick of it again.

Kung Lao



Deadly ninja hats – don't you just love 'em? Well someone obviously does because that's Kung Lao's main form of attack. Keep spinning your

bladed headgear as a projectile, alternating the height of the attack as you do so to prevent the recipient from blocking. Once they've got thoroughly fed up with all this and try leaping in to attack you quickly switch to a Whirlwind Spin. Yon smarmy rival is now caught up in Kung Lao's most powerful special.

Don't be tempted to overuse the Teleport Move, however, as Kung's variation on this theme leaves him very much open to a smack in the mush.

Charlie J Cool

■ Price: £19.95 ■ Publisher: Rasputin Software ☎ 01689 850 770

Rik Skews tries desperately to be cool, but ended up feeling more of a Charlie than usual after playing Rasputin's latest.

You can burn me at the stake for saying this, but as far as I'm concerned the Amiga is not well endowed with decent platforms. Only Ocean's *Rainbow Islands* and more recently their Sonic 'tribute' *Kid Chaos* are likely to distract me from playing the Mega Drive's latest *Sonic Instinct*, or the beautiful *Donkey Kong Country* on the Super Nintendo. (What about *Bubble And Squeak*? - Ed).

I was hoping the latest from *Clockwise* and *Jet Strike* creators Rasputin would be different, considering the pedigree of their previous games. Sadly it proved otherwise. Things don't get off to a good start for *Charlie J Cool*, as the game features one of the most cheese-heavy storylines (and desperately unfunny manuals) I've had the misfortune to read in a long while. It goes something like this ...

After being hit and supposedly 'killed' by a falling grand piano, Charlie floats up into the air and eventually lands in The Netherworld, seated in a comfy black leather chair. At the end of this room are three doors marked Utopia, Midway and Pandemonium, which translate into good, neutral and evil. The Netherworld is a place where dead

people wait while higher beings examine their lives before deciding whether to send them to Heaven or Hell.

It turns out that Charlie has died about 50 years too soon, and in order to decide whether he should be sent to Utopia or Pandemonium he must journey through the seven worlds of Midway. His goodness rating will alter depending on how many good or bad creatures are killed. Wipe out more good ones and pandemonium beckons, while squishing more bad guys will result in a speedy trip to Utopia. If at the end of the seven worlds he still has a neutral rating then his life will be restored, his memory of the messy grand piano incident zapped, and he can carry on in the real world as if nothing had happened.

These seven worlds are platform-based and each is divided up into four zones. The levels themselves are set around all the regular platform

worlds which include ice, forest and industrial. Score-boosting gold coins can be collected as well as numerous pick-ups, which include a heart for an extra life and a pair of shoes for turbo speed. Secret rooms abound too, complete with their own surprises. The aim of each level is simply to find the key (which is randomly placed each time you play) on each zone and then get to the exit.

It's uninspired stuff, but then most games have been done to death these days. The thing is these other games tend to offer new features and ideas in order to get around this, but *Charlie J Cool* offers none. For a start the graphics are the usual cute platform nonsense, although Charlie himself is remarkably unappealing. And he seems to have been blessed with helium boots, as a single upward tap on the joystick results in spectacular leaps skyward. This can even result in



▲ Find the key to open the door at the end of each level.

Charlie disappearing off the screen for a short time, and while the game designers might argue that it's an element of skill to judge where he will reappear, I just found it irritating to have to make sure he didn't end up in yet another life eroding chasm.

Sound consists of twee ditties and weak FX. However, the biggest flaws lie in the gameplay. This may look like *Super Mario World* but it sure doesn't play like it. There are numerous points in levels where it's possible to get killed through no fault of your own. For instance, it's easy to get hit by a baddie and then thrown down a chasm from the resulting recoil.

The levels themselves are all very similar, from the layouts to the baddies contained within them. To be fair though, they're often non-linear, with an option to bounce around high up platforms or play it safe along the ground. My main problem with the game though, is the lack of tension it creates. All that has to be found to complete a level is a key and door, both of which are always blindingly obvious to discover. Having to collect a certain number of gold coins before the exit door sprung open would make all the difference, as would more challenging baddies. Those present are not only pedestrian but follow very predictable patterns.

With the likes of *Donkey Kong Country* around, platform games have to be something remarkable these days to stand out, and even though the best platformers are appearing on the consoles, *Charlie J Cool* is still a poor effort, whatever the system. An A1200 version is also available, and this redeems itself somewhat with more colourful graphics, but the gameplay is still not improved. ■



▲ The good guys tend to be in colour like that red ladybird down at the bottom left, while the baddies are a miserable shade of grey.



▲ Another level but it still looks and plays much the same. Not very well in other words.



▲ Collect the coins to boost your score.

CHARLIE J COOL £19.95

A500	workbench version	1.3
A500	number of disks	2
A500+	RAM	1Mb
A500	hard disk installable	No
A600	graphics	48%
A1200	sound	39%
A1500	lastability	38%
A1500	playability	42%
A2000	OVERALL	
A3000	Sadly, too simple for today's games market.	
A4000		

40%

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PGA European Tour

■ Price: £27.99 ■ Publisher: Ocean ☎ 061 832 6633



popular and widely viewed sporting event and this is why EA, having had mega success with their uncomplicated and highly playable original *PGA Tour* game, have jumped on the Euro bandwagon.

And why not? Europe has some of the best courses in the world and *PGA Euro Tour* features five of these, from four different countries. Britain is favoured with two: Wentworth in Surrey and Forest Of Arden in Warwickshire. The rest of Europe is represented by Crans-Sur-Sierre in Switzerland, set against a backdrop of snowy alpine peaks, Le Golf National in France and finally Valderrama, in sunny Andalusia at the tip of southern Spain.

The options

PGA Euro Tour offers you the opportunity to pit your skills against up to four other players. These can be either human or computer controlled famous golfers, of which there are ten including such well known names as Colin Montgomerie, Bernhard Langer (who I always used to think was a Formula 1 racing driver), Seve Ballesteros and Ronan Rafferty. The options allow you to play a practice round, a skins match, a tournament, or compete in a match play or shootout 'league' against all the other available players.

Having selected what you want to play and your opponents you choose a course and then, in no time at all, you're being introduced to the 18 holes by a smug TV presenter and, soon after, the first hole, presented in time honoured fashion by a golf celeb.

Ball control

Control is by mouse, and taking a shot is regulated by player stance, the direction you aim the ball in, what club you use and, of course,



the power bar at the bottom of the screen.

You must have played a golf game before, so I don't need to explain the power bar except to say that this version is easy to follow. The other factors affecting your shot will be where the ball lies and wind speed/direction. *PGA Euro Tour* doesn't just consist of sunny locations, so in keeping with reality the weather conditions are variable and can affect play. Normally everything is bright and cheery but when the TV presenter announces that Le Golf National, home of the Peugeot Open is overcast with blustery winds, you can guarantee dodgy ball flights.

As usual with EA sports titles, even those published by Ocean, there are a wealth of viewing, playing and statistic options. Under the drop down View menu the following options are available: Overhead view, Ball Lie, Green, Hole Brower, Instant Replay, Course and Fly By Hole Preview. The Hole Brower option is especially impressive and allows you to go over the terrain as if you were in a helicopter, zooming in and out and adjusting the approach angle of the camera.

Under the Shot menu you can do a Chip Shot, Normal Shot, Punch Shot, Fringe Putt or, if things are not going well you have the option of picking up the ball, or completely coping out and taking a Mulligan.

A classic

PGA has always been my favourite golf game and although the original hasn't aged very well graphically, it's still a classic. Despite loads of



▲ And Jim Conway scores a beautiful Birdy for the skins on the third hole.

new features this is essentially the same, though on the A1200 both graphics and sound are superb. Good or overcast weather is represented and the screen scrolling and animation is silky smooth. *PGA European Tour* comes on two disks, and swopping isn't too bad, though a second disk drive is preferable (you should have one anyway). Overall, it's still a classic, but I do wish that someone would now come up with an original golf idea rather than a recycled one. ■



▲ Four of the five courses available in *PGA Euro Tour*. Weather conditions can vary with each course.



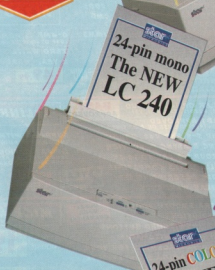
▲ These pro golfers don't say much, but they sure can hit a ball! The graphics are beautiful.

PGA EUROPEAN TOUR

workbench version	3+
number of disks	2
RAM	2mb
hard disk installable	no
graphics	80%
sound	79%
stability	86%
playability	88%
OVERALL	
A fine round of good-looking golf.	
	84

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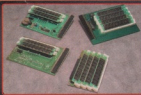
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Rallying is for lunatics, so we gave Alan Dykes a couple of cars to try out ...

Power Drive

■ Price: £29.99 ■ Publisher: US Gold ☎ 021 606 1800



Colin McRae is a hero. The Scottish rally champion's rise to the top whetted my appetite for a bit of rallying action so when Powerdrive arrived in I was raring to go. The First Impressions preview we did on it three months ago looked positive – there promised to be six beautifully-constructed cars; a Mini Cooper, a Fiat Cinquecento, a Renault Clio Williams, a Vauxhal Astra 16v, a Toyota Celica and an Escort Cosworth (though not McRae's hot Subaru Impreza), each with separate wheel sprites to add to the realism, and a torturous international rally circuit to complete.

The locations the cars rally in



▲ Driving at night can be fun. You need to make sure your car's headlights are in good nick.



▲ The desert tracks of Kenya and Arizona provide yet another type of surface for the cars to slide on.

range from wet and windy Monte Carlo and snowy Sweden, via baking hot Kenya and Arizona to unpredictable Britain. The levels consist of direct competition rallying against another (computer) competitor, time trials and at the end of some levels skill tests which check your driving ability.

Ad astra

The cars are grouped into three classes, in the same way as they would be in real life. Group one consists of unmodified production cars which are generally available to you and I for relatively low cost; these are the Mini and Cinquecento. Group two are modified cars, the Clio and Astra, while Group three contains the fully aspirated Celica and Escort. At the beginning you are limited by funds to Group 1 – though I have to say that £25,000 for a mini or £27,000 for a Cinquecento seems a bit steep, but that's life. After this initial outlay you are charged for each race you enter, and as you progress through the different stages around the world this will increase. Once you have earned it you get to upgrade cars to the next group.

The actual simulation of rallying isn't all that bad, the cars slip and slide around the place and the scaling of the track and speed is about right, but it's this attempt at recreating the experience that's ultimately Powerdrive's downfall. The game is just not satisfying to play. At the beginning it's too frustratingly difficult to keep your car on the straight and narrow and although you do get used to it after a while control

always remains messy. The big problem here is the steering. Maybe rally cars are geared to lock to either side of their steering spectrum in less turns than normal road cars, but all you have to do is breathe on the joystick in Powerdrive and you're off into the ditch. This doesn't allow you to take your mind off the controls and concentrate on the road, as they never really become natural.

Shock treatment

The way damage is built into the game seems like a good idea at first but soon becomes frustrating too. It's simple; when you hit anything chunks come flying off your car, representing the effect of the impact. Damage can be done to five parts of your car; the engine, the tyres, the shock absorbers, the geartrain and the spotlights, and the level of damage is displayed as a percentage. Between races these can be repaired as long as you've earned enough money by qualifying or winning, as well as picking up handy wads of cash that just seem to be lying around the track. But during the race, as damage is inflicted, your car will begin to slow down, and down, and down ... until you can't even make it to the finishing line in time to qualify. You have the option of hitting the escape button and ditching in the race, at a cost, and once frustration has started setting in this is all too easy to do.

There are other things I don't like about the game too: why doesn't the cars' bodywork fall apart? And how come the computer controlled cars are so bloody good? But I must also admit that for a while Powerdrive had me hooked. The cars aren't perfect but they are cute

(especially the Cinquecento) and the skidmarks they leave behind is a nice touch. Night driving and bad weather are also reasonably well implemented, though driving at night demands turning the lights off in whatever room you're in – you'll never see the road if there's



▲ Debonkers cannot be injured, unlike the real thing.

anything reflecting off your monitor.

I tried to like Powerdrive, but it really fought hard against my sentiments and in the end I had to put it aside. As a rally game it is marginally interesting but it just doesn't stand up to scrutiny in the big bad world of Amiga racing games. One more word of advice though: If you do buy it, go straight to the options menu and turn off the music, it's dreadful. ■

POWERDRIVE

A500	workbench version.....1.3 +
A500+	number of disks.....2
	RAM.....1Mb
	hard disk installable.....no

A400	graphics.....78%
A1200	sound.....48%
	stability.....66%
A1500	playability.....58%

OVERALL
Could drive you around the bend.

61%

The first B-Movie specifically filmed for the CD32 has arrived, along with two stonkingly good games. Alan Dykes spills the popcorn ...

Tower Assault

■ Price: £29.99 ■ Publisher: Team 17 ☎ 0924 291 867

The CD32 has been under-used since it first went on sale. Bringing out games for it has largely been a process of porting Amiga or PC product across and tarring them up with some sound. No one has been bothered to really take advantage of its combination of CD ROM drive

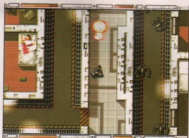
and AGA chipset, until now that is. Team 17 are many things; top partying geezers, purveyors of quality software to the masses and black sheep of the industry. They've gone their own successful way and remained faithful to their developer roots, but there's one thing they are not – actors. Well I suppose they are now, in a manner of speaking,

because three of them star in the first real filmed CD32 intro sequence. The *Alien Breed Tower Assault* intro has been put together using live action footage and speech by producer John Allardice, combining *Lightwave* rendered space ships and cut scenes where the Marine Commander, played by Marcus Dyson gives instructions in a deep Yorkshire accent to two Space Marines. It borrows from a wide range of sci-fi and action movies, most notably and predictably *Aliens 2*. What a coincidence.

That said it's actually a pretty good intro, if a bit corny and over the top. The screen takes up about one fifth of the monitor and because of this it has an acceptable frame update rate. It's also shaped roughly like it would be on a wide cinema screen so after a few seconds you forget how small it is.

The intro movie does tend to go on a bit though. After you've seen it once or twice you'll want to skip past after the first minute or so, which contains some stunningly atmospheric music as well as a rendered planet and spaceship. Last month we mistakenly quoted the price for *Tower Assault* on floppy disk as £29.99. We were wrong, it is in fact £19.99, but this version definitely costs £29.99. Why? Because it's not only got the rendered intro it's also got *Alien Breed 2*.

But the primary reason for buying this CD still has to be *Tower Assault*, the last of the *Breed* series and in many ways the best. It falls, in terms of difficulty, between the



▲ *Tower Assault* itself remains unchanged, but fans have the additional benefit of *Alien Breed 2* on this CD.

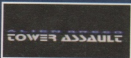


▲ This marine has just stopped in a mine and is now asking for even more trouble by shooting at a remote control gun.

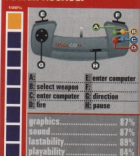
first two; more so than *Breed 1* and less so than *Breed 2*. Once again it's a top-down view shoot 'em up for one or two players. The graphics have become more detailed and gruesome with the addition of dead and mutilated bodies around the levels, hence a voluntary 15 rating. Other new features include non-linear progression through the game, with Team 17 claiming that there are over 270 different ways of completing it, and there's also a 'retreat' mode that allows you to back away from an object or breed while firing at it. It's a classic game and a fitting finale to the series. Need I say more? No. Get it. ■

Check this out ...

Tower Assault will be famous and infamous in equal proportions for its cinematic intro. Either way it's still a ground breaking idea. Check out these stills ...



TOWER ASSAULT



OVERALL
A movie and two great games.
A must.

90%

Marvin's Marvellous Adventure

■ Price: £29.99 ■ Publisher: 21st Century ☎ 01235 851853

Marvin first appeared on the A1200 not so long ago. Now he's followed that well-trodden path across to the CD32. The plot remains the same pizza delivery boy Marvin (that's you) walks in on a feud between a mad professor and an evil villain, only to be zapped into another dimension where you must leap your way through five funny little worlds, from platform to platform to free the professor. And there's plenty of other stuff to do, such as running over mad clowns, hitching rides on the backs of caterpillars, and collecting millions of little moons and stars along the way.

But there's only so many platforms that you can leap onto without getting a tad bored. Even ducking down the

odd wall into one of the numerous sub games can become a bit tedious. The background scenery remains cute throughout, so cute that you want to puke sometimes. Even more frustrating is the fact that when you die you get sent back to where you originally started the current section of the level, which can become boring after a while - having to trundle through the same manoeuvres all over again. However, there is a password system so you don't have to restart the whole game from scratch if you happen to lose all your lives. Another niggle is that the CD32 controllers aren't really used to their full potential either. There are the same moves as the A1200 version and in some cases I had to swap over to the joystick to help me reach those out-of-my-vision platforms. Another

moan is that the music is enough to drive a woman insane. It's a sort of supermarket-come-Euro rave type medley. I could only stand it a few moments and then had to turn it off.

Maybe, I'm being unfair to Marvin. I liked the A1200 version and was looking forward to the CD32 game, but I feel cheated. OK, the graphics are really nice and the game is good enough but it is no different to the A1200 version at all, except that the music is extremely irritating. Take *Beneath A Steel Sky*, for example - Virgin took an excellent game and made it even



better on the CD32 by adding new sound effects and even more personality to their in-game characters. Marvin should have been better on the CD32, but isn't. Pity. ■

Lisa Collins

75%

Super Stardust

■ Price: £19.99 ■ Publisher: Team 17 ☎ 0928 201 846

Back in the mists of time, Asteroids swallowed up kids' money in the arcades like no other game of its day, and it annoyed the hell out of my mother every time she walked into the corner shop near our home. Being greeted by the sound of bleeps and explosions was not top of her

daily mirth agenda, but that's the older generation for you ... no concept of fun. "It'll ruin your eyes" she used to say, "staring at those TV screens all afternoon". And her with a pair of glasses for the last 30 years! Every generation has something that'll "ruin your eyesight", and it's always fun to do. Ours just happens to be arcade games.

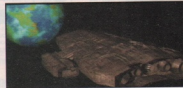
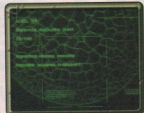
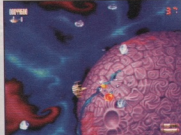
Thankfully, good games never go away. And *Stardust*, the product of Bloodhouse, a

programming team that lives so close to the north pole they can see the stars 24 hours a day, was really little more than a massively overhauled asteroids on the Amiga. The plot was simple: if you can see it, shoot it before it blows you up.

Super Stardust is more of the same but with nicer graphics. Your spaceship starts off armed with a pitiful little peashooter, a set of rocket thrusters and a limited amount of shield power. Your rendezvous with faith begins in an asteroid belt where you've got to shoot rocks to pieces, then even smaller pieces and finally destroy them altogether while avoiding being hit yourself.

Things get more complicated when spaceships start to appear, especially the really neat Bird Of Prey which ripples in and out of the background, unleashing itself to release a homing missile from time to time. There's also a time limit on each screen and when this runs out lots of little spacecraft appear and make life more difficult - this does help your score though. There are also various power pickups including extra lives, shield energy, gun and energy power ups and extra points, and a helpful young lady who tells you what you've just done.

Our Assistant Technical Editor Tony Horgan loves swirly tunnels, in fact I think he probably invented the term, and when you're finished each level of *Super Stardust* that's what you get for your trouble. Yes, in order to



get to the next level your craft must go through a star gate, avoiding spiky mines, other spaceships and of course asteroids. Anyone with an Amiga 1200 or an SX1 will have seen the Super tunnel level demo on our December issue, and this really is an example of how state of the art AGA graphics can be used to their full extent.

There is no difference whatsoever in either gameplay or sound between the CD32 version and the A1200 one, except for Bloodhouse's rendered intro. This is very nicely done, viewed on an individual frame basis, but as a whole it is cut very badly and suddenly which completely ruins the impact.

In the final analysis something extra would have been welcome for the CD32 version but *Super Stardust* is still one of the best AGA specific games around. You should add it to your collection, now. ■

Ernest Lee

90%

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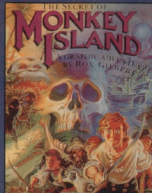


VFM

More budget best buys and bad news from Tony Dillon and Alan Dykes. 17 games in all, at paltry prices.

LUCASARTS CLASSIC COLLECTION

KIXX OUT NOW £29.99



Adventure game fanatics have never had it so good! This month sees the release of one of the best adventure compilations since the *Last Treasures Of Infocom*. For the meagre price of £29.99, you can get your hands on five of LucasArts' best games, and even the chance to chart the progress of the graphic adventure, starting with the game that began the whole scheme – *Maniac Mansion*. The forerunner to the current PC favourite *Day Of The Tentacle*, it's a romp through a spooky old house where aliens have crash landed. Although it's quite an early

LucasArts title, the humour is sharp, if a little too American for my liking, and the graphics are rather basic. An

enjoyable game, and a good introduction to the genre.

Zak McKracken And The Alien

Mindbenders is next, and this, to my mind, was really the shape of things to come.

Improved graphics, packed with wacky humour and 60's sci-fi schlock, the puzzles are

more intricate, the cast more entertaining and it's generally a far better adventure – one that really set the company up for the future.

Loom has one of the best storylines of any graphic adventure yet released, and it's this that makes it such a compelling game to play. You take the part of a young acolyte, who has to learn the magic of the Loom by collecting pieces of music that are woven into sonic tapestries, which are then used to save the world. Once more, the graphics have been improved, with excellent use of different sized screens to create a panoramic, cinematic effect.

POLICE QUEST 3

KIXX XL OUT NOW £14.99



The *Police Quest* series is my favourite set of adventure games ever, and they just get better. If you haven't played any, then you won't know that in these games you play officer Bonds, one of the best cops the city of Lytton has, and you regularly get called in to catch master criminals like Death Angel, the notorious drug runner.

It plays just like any other graphic adventure, but the nicest thing about it is the atmosphere it generates. You play the part of a real police officer, and therefore have to follow routine all the way through the game. Indeed, you'll even find an abridged copy of the police *procedures and operations* manual in the box, which should give you a few clues as to how to get along. More than that I don't want to say, as the joy of this game is working your way through, watching the plot unfold. This should keep you engrossed for a long time.

90%



Walk to Push Pull Give key Open Open Close Read Walk to Pick up What is Unlock Use Turn on Turn off Fix



Hello again, Marcus! Did I miss anything while I was gone?

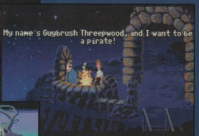


In time honoured fashion, Indy gets there just too late.



Loom shows that even the top of a mountain doesn't guarantee peace.

Speaks in the haunted house in Maniac Mansion.



Every schoolboy's childhood dream in Monkey Island.

And then we come to the two big titles, *Monkey Island* and *Indiana Jones And The Last Crusade*. *Monkey Island* is generally regarded as their second best title, after *Monkey Island 2*, and is funny, intelligent, beautifully designed and generally redefined graphic adventures for the Nineties. *Indiana Jones And The Last Crusade* is proof that a good licence can make a great game, as you control the famous adventurer and his father past a generous helping of traps and Nazis.

LucasArts are the self-proclaimed kings of graphic adventures, and this compilation backs up that claim nicely. If you've never seen the appeal of these games, then this compilation could be just what you need to put you on the straight and narrow.

92%

REACH FOR THE SKIES

HIT SQUAD OUT NOW
£12.99



Take a look at the games that Rowan Software are releasing at the moment,

and you could be forgiven for thinking that they are the greatest proprietors of flight simulators there have ever been. Titles like *Overlord* and *Dawn Patrol* look so fantastic, it seems hard to believe that they could have even got it wrong. However, there are a few skeletons in the closet, and unfortunately the Hit Squad has chosen to re-release one of them. *Reach For The Skies* may be the most thrillingly realistic re-enactment of the Battle Of Britain, but as a computer game it falls down in a few places.

First of all, it's very easy. The enemy planes seem to have one hell of a hard time shooting you down, that's if you ever decide to get airborne. Yes, believe it or not there is a brand new flight simulator tactic in *Reach For The Skies*, something that would have caused the war to end nearly five years earlier had our brave boys tried it. You can taxi all the way to Germany, even over the channel, and you can't be shot on the ground! When you reach an enemy base, quickly take off, bomb it and then land and you can meander to the next target. Easy, eh?

I'm sorry, but bugs like that are just annoying, and cause what could have been a great game to fold up its wings and die.

41 %



▲ Firing across the chasm in Flashback.

DELPHINE CLASSIC COLLECTION

KIXX OUT NOW £29.99



Delphine, like LucasArts, also brought a huge touch of originality to graphic adventures, although their tack was considerably different. Rather than take the side on, bitmap based imagery of standard adventures, their aim was to create something much more along the lines of an interactive movie, using polygon graphics overlaid onto bitmap backgrounds, and some very unusual camera angles to create a film-like effect.

Cruise For A Corpse is the perfect example of this. You are a detective on a cruise holiday, when someone reports a murder on board, and you leap into an Agatha Christie role as you set about discovering the identity of the murderer. It's a standard graphic adventure in play, with the mouse pointer used to select control objects and icons, but the graphics are nothing short of stunning. Admittedly, still images might not look particularly amazing, but when you see the characters walking around, you have to admit that there haven't been many games that have had such realistic movement.

Another *World* and *Flashback* took a completely different approach altogether. Although technically they were still graphic adventures, they were far more arcade orientated than most, combining the object collecting and puzzle solving of most adventures with platform game action. In these you not only have to collect the pass-key and credits from the old guy at the bottom of the well, you also have to get your character over the holes in the path and past the armed guards. For the first time, a graphic adventure could be described as exciting.

Operation Stealth, on the other hand, is one for the purists. Telling the tale of a government agent on the hunt for a stolen Stealth fighter, it used a standard side-on view of the world with a typical icon bar at the bottom of the screen, just like any LucasArts adventure you care to name. Thankfully, the storyline is gripping enough to make the game original, and it's a breath of fresh air to play an adventure game that isn't completely fantasy.

Delphine may not have the reputation that LucasArts have, but this compilation proves that they are right at the top of the tree when it comes to adventure games. What can I say? If you don't have the games on this disk, then you would be well advised to pick this up!



One of our agents is already there. According to his last report, he seems to be of some most interesting information.



▲ You may be handy indeed, but that won't stop you jet setting around the world.



▲ Any corpses in this kitchen are strictly for dinner only.

86 %

COMPILATION

Cannon Fodder
The Chaos Engine
The Settlers

T2 The arcade game
BEAU JOLLY OUT NOW £34.99

There seem to be two generally applied rules that publishing house marketing bods learn in game packaging school, for when they're bringing out game compilations: 1. Always put a couple of very good, reasonably new games in the box and fill the rest with old or sub-standard games that don't stand a chance of selling any more. 2. Call it 'Classic' this or 'Super' that, or some other clever title. Well Beau Jolly have obviously decided to hire a marketing person who has never been to this particular school because 1. Even the duff game of this bunch is still worth looking at when seen in the context of this compilation and 2. Much to the consternation of *CU Amiga Magazine's* designers, they have declined to name the pack anything in particular (which means that we have no big headline), choosing instead to simply list the names of the games on the front of the box and let them speak for themselves.

And this little lot are well capable of speaking for themselves. I would sooner wrestle alligators than choose which game was the best in this compilation: *Cannon Fodder* or *The Chaos Engine*? *Sensible Software* or *The Bitmap Brothers*? Tiny sprites and mouse control or big and beely sprites and joystick control? Two classic games of the 90s.



Cannon Fodder

mouse to get around, you move a target over the screen, pressing on the right button to get your soldiers to fire, or both buttons to throw a grenade or launch a bazooka missile. The game is just as much a tactical puzzler as a shoot 'em up, as the right route has to be found through the fields of enemy fire. There are 24 levels, each sub-divided into as many as five missions, spread out among green fields, the jungle, the desert and the arctic. It combines hair-tearing frustration with massive enjoyment, and quite frankly if you like games and you don't



The Chaos Engine

have it, you're barney. *The Chaos Engine* is a multi-level, multi-player shoot 'em up which involves you and a friend, or you and a very greedy computer character trying to save the world from a certain Baron Fortesque's wish to destroy it with a machine called, funnily enough, the Chaos Engine. There are six characters to choose from, each with different characteristics: the Gentleman, who benefits from speed and brain power; the Navvie, who benefits from brawn; the Mercenary who has a big gun; the Preacher, who's smart; the Thug who's strong but a bit dim and the Brigand who's a bit of an all rounder. When I said that the computer characters are rather greedy I meant it, they will steal points and bonuses at your expense and it really does matter which character you choose for yourself and to accompany you. It's breathtakingly addictive.

The third best game on the compilation, and the odd one out, will not appeal to everyone but is still a classic in its own right. *The Settlers* is a mediaeval world-building sim which unusually combines both detail and cuteness. The question is this: would you be capable

DESERT STRIKE HIT SQUAD OUT NOW £12.99



It's great to see and play *Desert Strike* again just after its successor, *Jungle Strike*, has been in the office. In my opinion, like Kellogg's Cornflakes, it's still the original and it's still the

best. The new game might have updated aircraft and more detailed graphics but it lacks the charm and impact of the original which, after all, had a storyline that was closer to reality than most games.

Basically the moustached and definitely rather Iraqi looking General Kilbaba has emerged as a Middle Eastern warlord and is hell bent on causing trouble for the region. You play the part of a US Airforce Apache pilot sent by the president to the battlezone to carry out attacks on Kilbaba's forces, and rescue captured special forces soldiers sent in to do likewise.

You can control the helicopter using either joystick or mouse, and the space bar toggles between cannon, hellfire or hydra missiles. There is a map screen accessed by pressing F10 which shows you where your Apache is in relation to targets, your friendly aircraft carrier and supplies of fuel and weapons.

The amount of detail in the game is impressive, with all of the enemy weapons well researched and realistically drawn. Points are gained in varying degrees for destroying AA batteries, enemy ships and tanks, fuel dumps and bases.

Desert Strike is still one of the best shoot 'em ups on the Amiga - and at £12.99 it's a bargain..

92%



The Settlers



T2

it's good fun in small doses, and with the quality of the other games in this compilation that's all you'll ever want from it. If you haven't got both *Cannon Fodder* and *Chaos Engine* already, this is an essential purchase. Miss it at your peril!

90%



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WILD, WICKED AND WANTON AND JUST HOPE THAT IT'S NOT YOU THAT'S SHE'S WANTING! OUR GIRL IS HERE AGAIN TO SOLVE ALL OF YOUR ADVENTURE PROBLEMS.

EYE OF THE BEHOLDER

I am completely stuck in *EOTB*. After finding the imprisoned dwarf on Level 10, I have come across two doors inscribed 'In case of Fire' and 'In case of Flood'. Could you please, please help me complete this mind boggling adventure.

Paul Clemmett, Co. Durham.

If you travel west you'll come to a place marked 'Hive'. Go north, then west and you'll find a north-south corridor which has a lever at the southern end. Push the lever twice and the sliding block at the northern end will move north revealing two alcoves to the west and east. Push the west lever twice and you'll be able to move into the hidden rooms to the north.

POLICE QUEST III

Help Me! I recently bought *Police Quest III* and really enjoyed playing it - then I got stuck. I am at the beginning of the 5th day and I heard some guy in the office mumbling about plotting crimes on a computer, so I tried. I tried to join together all the little dots, but that didn't work either. I tried to put a pentagram on the map and (surprise, surprise) that didn't work either.

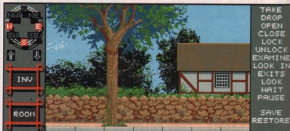
Steve Silver, Newcastle.

Like most men you've got the right idea, you've just failed the practical. Looks like I'm going to have to take you in hand. Turn on the computer and go to file 199145. Use the toolcity map program. First plot the points of the murders, and these are: 200W Palm, 300W Rose, 300E Rose, 300S Sixth. Now connect the points as follows: 200W Palm to 300S Sixth, 300W Rose to 300E Rose, 200W Palm to 300E Rose. 300S Sixth to imaginary point on Palm between Eighth and Ninth street. 300W Rose to imaginary point on Palm between Eighth and Ninth street. The next murder should now be on Palm between Eighth and Ninth.

KNIGHTMARE

I am in the 'Dizzy Rooms' of Knightmare Castle and I would like to know what EXACTLY I have to do with the four switches on the wall?

Barry Rainsbury, Norfolk.



▲ The Knightmare is only just beginning...

I'll start by calling the four switches 1 to 4 from left to right (not going too fast for you?). Flick switch 4, turn around and go through left door, follow the path to find the key. Flick 4 2 2 2 get a key and put the other in the keyhole. Flick 2 3 4 2 4 and get key. Flick 4 2 2 4 3 3 1 2 and put key in keyhole. Flick 1 3 3 1 1 3 1 and put key in keyhole to get another key. Flick 2 4 4 2 2 1 1 3 3 3 4 and flick hidden switch. Walk onto the pad, over the now covered hole and flick hidden switch on the wall to the left. Now Turn around and face the way you came in. Throw an item at the new wall and it will land on the pad. Turn round and walk onto the pad. Flick the switch two squares right then walk to the door. Two paces right of the door is a switch. Flick switch to find key. Open the door and flick the hidden switch.

AMBERSTAR

I know that you hang about in old castles and towers, so I reckon you are just the person to help me with the Tower of Riddles in *Amberstar*. I think it is a great game, but the riddles seem to be really hard.

Phil Blakeburn, Maidstone.

I have got all of the answers for you, but don't ask me to explain them. 'Everyone listens to it again and again, though it never says a single word. Guess what it is so silent, and in sleep you lie upon it?' - EAR

'It flew featherless, into a tree leafless, who ate it?' - SUN

'A woman came mouthless, and ate the bird featherless who was flying.' - SNOW

'What has no body, but is still visible?' - SHADOW

'Neither air nor wind are as fast as I. I travel through worlds, never seen by a human eye. I am here and there in seconds - but

what is my name?' - THOUGHT
'Once white as snow, then green as clover, then red as blood - you know me well.' - CHERRY

'It is the most beautiful bridge - no man has crossed it. It is a wonderful sight because the waters move over it.' - RAINBOW
'You do it all the time. It is nothing, but everything. It is the greatest riddle of all in the Universe.' - LIFE ■



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8/10 PC Review



Stimulating simulations

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LEANING OVER THE EDGE



Well another year has come and gone, and with it we very nearly lost the Amiga. What will the coming year bring for the Amiga? I spent much of my time at the recent World of Amiga show talking to 'people in the know' to find out exactly that. The CU Amiga

Magazine stand was near the entrance to the hall, and over the three days it seemed that most of the world wide Amiga community walked through the doors and came over to say hello: developers from Germany, America, Australia and France showed up, along with thousands of loyal and devoted Amiga users. Many thanks to those of you who turned up and for the kind comments about the magazine, it was great to meet so many of you in the flesh.

Perhaps the most surprising element was that everyone I spoke to felt the same about the Amiga - we all like the Amiga for its power, but also because it's not overly complicated and does what we want without too much hassle. Developers from all over the world expressed their commitment to its future, and we're right behind them! As a result you can be sure the best Amiga products will still be available for a long time to come and many will undergo major upgrades, and CU Amiga Magazine will review them at every stage. The first of these can be seen in this very issue with exclusive reviews and previews of ImageFX (page 94) and Directory Opus (page 86).

Many new products will also find their way into the UK for the first time in 1995. PhotoGenics is perhaps the most exciting of these, check out Tony Horgan's detailed review of this on page 88. Others include a powerful games creator, GameSmith, and a new comms program, Termite - both of which get the CU Amiga Magazine treatment on pages 85 and 98. These last two are from America, but what of Germany and Australia? During the show we approached many developers from these countries asking and advising them to launch their products over here, and we're now closely involved in negotiations to ensure that many of these products find their way into the UK dealer channel. Although we obviously can't give too many details away yet, these include literally masses of CD-ROM products, and hopefully a new CD-ROM drive for the A1200 (watch this space for exclusive details), and some amazingly powerful accelerators.

All of a sudden everyone's releasing graphics software. What with Photogenics, Personal Paint 6.1 and Image FX 2, this has to be the best looking reviews section ever! And just look at the rest ...



GameSmith 85

Fancy writing your own arcade-speed games? John Kennedy examines *GameSmith* which aims to let you do just that.

Directory Opus 5 86

You've got the exclusive *Directory Opus 4* on our fabulous coverdisk, now take a sneak peek at the new version with Andy Leaning in this exclusive preview of the most awaited utility upgrade of the year.

PhotoGenics 88

CU Amiga Magazine exclusively previewed *PhotoGenics* in November. Now read Tony Horgan's in depth review of the finished product - is it as good as it looked?



Personal Paint 91

The long running underdog of Amiga graphics packages is back and we've got a full review of the latest version 6.1.

Competition 92

Fancy winning a copy of *Photogenics*? Well we've got five of them to give away in this massive compo - get your postcards ready now and turn to page 92.

ImageFX 2 94

ImageFX is the undisputed champion of image processing on the Amiga, and now it's been upgraded. Andy Leaning tests the program out in an exhaustive and exclusive review.



Termite 98

If you want to explore the fascinating world of Comms, Internet and modems take a look at this review of *Termite*, a brand new Comms package from HiSoft.

PD Scene 101

Mr Horgan goes public in yet another explosive review of what's best and what's not in the world of public domain games and demos.

PD Utilities 106

If the festive season has burnt a hole in your wallet, check out the latest batch of virtually free serious software, as perused by André Digard.

Get Serious

Express PD Galore

CD-ROM

CD-ROM discs containing PD collections are now very common, in fact in the last few months we've had more of them delivered to our offices than any other type of software. The reason for this is that's easy to put the many PD titles available on to a CD-ROM disk and then sell it - making money for the PD software house whilst giving excellent value for money to the user. The latest such collection to arrive is Express PD Galore from Express PD.

Like most others is comes packed with utilities, programs, demos, games (200 of 'em) and 250 plus music modules. However, it's one of the better ones we've seen for several reasons. Firstly, that it works on the CD32, Archos A1200 CD-ROM drive, A570 and CDTV - so it be usable no matter what Amiga CD-ROM system you have - you'd think this would be obvious but it's surprising how many PD CD-ROM collections don't!

The next reason is the organisation of

the files on the disc. Naturally it has loads of different types of software on it, booting on a CD32 takes

you to a Workbench screen from where you can move to drawers called CD-tools, demos, games, AGA, music and finally productivity. These all contains utilities and programs that you'd expect to find in them. There's also a nice little menu system that allows files to be located and then copied to floppy disk.

The productivity drawer has further drawers for business, fractals, graphics, hard drives, printers and science and in total contains a simply massive selection of PD utilities.

Some of the best PD utilities and programs around can be found on this disk, although I was a little disappointed with the selection of demos, and the lack of



any collection of fonts. Overall, however, this is a good collection for more serious users, and there's bound to be something on there for you. Requirements: Any CD-ROM Amiga, CDTV, or CD32.

Available from: Express PD, Magazine House, Magazine Business Centre, 11 Newark Street, Leicester, LE1 5SS. Tel: 0116 2559711. Price: £19.95.

CD32
A570
A600
A610
A630
A640
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80%
80%

PIZAZ

Video-titling software

Got a genlock? Borrowed a camcorder? Then you'll probably need some way of creating and scrolling text. Pizaz is a program especially written for the task, and enables you to enter text and then define an effect or scroll direction. You can build up complicated scripts which you can save and use later.

Pizaz comes with three fonts as standard, but unfortunately all three are relatively huge type faces which look as though they have escaped from an old demo. They simply could not be used in any video production which wasn't about techno or cyberspace, so forget weddings

(unless the wedding in question is in cyberspace with a back-track from Massive Attack).

Typing the text in is straightforward (except

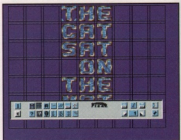
the backspace key doesn't work and you have to use delete instead) and it can be centred, or justified with a degree of kerning.

The special effects (spinning, flipping and so on) are actually linked to the fonts themselves: which means that a particular font can only perform a particular effect. So you cannot get any font to spin, flip and so because all the animation has already been pre-calculated and is supplied on one of the eleven disks. This is extremely limiting way of doing things, as unless you really enjoy embossed metallic fonts (which anyone over 30 probably couldn't read anyway) then too bad: you'll have to see if VideoFX will sell you some normal looking ones. The scrolling effects are very smooth, and text can be pushed and pulled from the sides or from top/bottom.

Unfortunately several times after scrolling, the main edit screen on my A4000 became corrupt, and the system crashed. This is poor, and not acceptable in a professional and hobbyist environment I'm afraid.

The manual is also very poor. Not just because it's bright green but because the software includes an irritating 'type in a word from the manual' protection scheme which pops up every so often, forcing you to go back to it again and again.

VideoFX have shown they have potential, but until they come up with something a great deal better than Pizaz you would be better sticking to



Deluxe Paint animations to title your videos.

Check out VideoStage Pro (CU Amiga Magazine, January 1995) or SCALA if you need a dedicated scrolling program.

Pizaz will work with any Amiga with 3Mb of ram (1Mb must be chip), workbench 1.2 or better. Although a Workbench 2 and 5-8Mb RAM is recommended to get the best use..

Available from: Video FX, 291 High Street Gilfach Goch, Mid Glamorgan, South Wales. CF39 5SH. Tel: 0443 674385. Price: £49.99.

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1 SENSIBLE WORLD OF SOCCER - £19.99

Sensible Soccer remains the top favourite Amiga Owners football game. Sensible software have replied to their rivals with the release of sensible World of Soccer. Integration of playing and management works really well. The playing side remains great with this version including more tackles and headers control, match statistics and extended tactics. SWOS gives you great control, greater than other management sims over match tactics. Devise your tactics then watch game in action. Play the game as a player, manager or player manager. Extensive database range of teams and players. This game has gained great reviews in magazines, holding it's own against dedicated management games and playing games. It takes the rivals and could well have beaten them all. There is a great following for Sensible Soccer range and this product will have done it proud. SWOS has not only been claimed as the best football game, but challenges strongly as the best Amiga game. An excellent product.

2 ON THE BALL (World Cup) A1200 - £21.99

World cup and league editions available. World cup edition released before league edition and received excellent reviews in magazines. Allows full world cup programme or start with qualifiers. Strategy sessions & pep talks. Involves strategy and skill but where this product excels is with the presentation. Uses a system of scanned watercolour images. Plays you the highlights of your match as they happen.

3 PREMIER MANAGER 3 - £16.99

Most of Premier Manager 2 system still there, but a great deal has been added. The game looks great with a new method of displaying the match. Isometrically viewed pitch with players positions updated according to minutes as they tick by. The players' have extended statistics. You can also decide where the players will play on the pitch at any given point in the game. Looking good and it could seem like a strong effort to compete against Prem.2 for the longest time in the top 10.

4 FIFA INTERNATIONAL SOCCER - £19.99

Sold a vast amount of copies on the SNES and Mega Drive. Now available on the Amiga. Large sprites, isometric pitch view and plenty of options. You can perform some great moves including backheels, diving headers and overhead kicks.

5 FOOTBALL GLORY - £16.99

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Gamesmith

■ Price: £99.95 ■ Developer: Oregon Research ■ Supplier: HiSoft ☎ 01525 718181



John Kennedy doesn't want you to read this review of HiSoft's new game development system ...

Every so often, a product comes my way for review that I don't particularly want to tell you about. It's not that it's especially awful, rather that it is so good that I don't particularly want to tell anyone else about it. Unfortunately, I need the money particularly badly this month, so I've had to force myself to write this review – but please do make a favour and skip over it. Thanks.

interpreter. It's not some crummy menu-based system which allows you to create about three variations of the same game either.

Got a brain?

Instead, *GameSmith* makes the breathtakingly cheeky assumption that you are already a competent

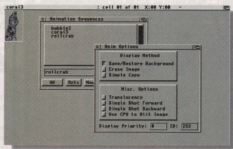
programmer using either C or Assembler. *GameSmith* assumes you have a brain, and that you're not afraid to use it. *GameSmith* comes in two parts: an Amiga program library of routines and an editing program. The library is like any other library, in that it consists of dozens of specially written functions which can be included in your code as easily as any other external function. The functions handle setting up screens (including AGA graphics), sound support, animation, joystick reading and collision detection, and are almost entirely written in Assembler.

You can use them from either *Assembler* or C, and your linker program will automatically include the ones it needs. You are then free to sell or give away your program as you see fit: although a mention of the fact that you made use of the system is encouraged. The editor will load in IFF

images in most formats, and save them out as C or Assembler 'include' statements, complete with all the structure definitions. This includes animations, which means that defining graphics in a program like *Deluxe Paint* and then converting them directly for use in your programs is dead easy. CITAS, the editor, will even handle collision detection tables and image priorities – exactly the long-winded, tedious business which puts me off writing more programs.

Free dice and DevPac

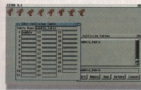
One of the major problems associated with other development systems is security: if your program loads images stored in standard IFF protocol, then anyone else can load them too. Some would-be programmers have been known to lift graphics from other games and demos, which is simply not on. *GameSmith* includes encryption routines based on your license number which will ensure that you are the only person who can get free and complete access to your graphics or sound. Even other *GameSmith* users won't be able to crack the code.



▲ With CITAS, animations created in Deluxe Paint can be loaded and converted directly into code ready to add to your own programs.



▲ Each animation can be previewed in real-time, and automatically controlled and retimed.



▲ It's even possible to use CITAS to create custom collision detection tables, which in turn simplifies coding immensely.

The Amiga has game development systems coming out of its (metaphorical) ears. First came AMOS and its many variations. Then came *Blitz Basic2*. And now here's a system from an unknown American software house ... why should anyone bother?

Unlike every other game development system on the market, *GameSmith* does not provide you with a new programming language to learn. There is no special 'GameSmith Compiler' or

need to start programming, all at a bargain price.

If you buy *GameSmith*, you are privileged to get a set of professional games programming tools, complete with an assembler and compiler thrown in for good measure.

But make no mistake – this is no package for the beginner. You WILL need to know about C and Assembler. The manual expects you to pick up most of what you need to know by looking through the example C source code, so don't think you'll be writing *Mortal Kombat 3* by the end of the week if you don't know the difference between a 'byte' and a 'struct'.

If you already know how to program, but reading through the official (and unofficial) Amiga hardware and programming documentation gives you a headache, then this is an essential purchase. The library functions cover almost everything you could need, and in doing away with mind-numbingly boring and fiddly playing with paint programs, the graphics editor will add years to your life.

Now I'm going to take a month off work and write some games. Hopefully by then we'll be able to take another more detailed look at this development system, and I'm sure it won't be long until the readers' submissions take a leap forward in quality, and games created with *GameSmith* tools start to appear on magazine covers. ■

GAMESMITH

A500	1Mb RAM, Workbench 1.3
A500+	Accelerator, hard drive and extra RAM recommended
A600	ease of use 80%
A1200	Mostly depends on how easy you think C or Assembler is ...
A1500	performance 95%
A2000	Some of the demo programs are extremely impressive. Look at that parallel scrolling ...
A3000	value for money 90%
A4000	With a 'real' compiler and assembler thrown in – this is a bargain.
OVERALL	
Excellent – for all potential games developers.	
92%	

Directory Opus 5

■ Price: £TBA ■ Developer: GP Software ■ Supplier: Wizard Developments ☎ 0322 272908

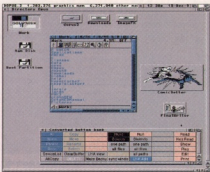
Directory Opus won practically every award going in the Amiga market. Now Version 5 of Directory Opus is here and it's probably the Amiga's most useful utility, to date. CU Amiga Magazine have been using it for the last couple of weeks and Andy Leaning presents this world exclusive preview.

AMIGA MAGAZINE

Reader Offer

You should now have *Directory Opus V4* - the full version - from our exclusive coverdisk. No, well go back to the front cover of the magazine and have a good look. Done that? Welcome back. If you want to upgrade to Version 5 previewed here, turn to our coverdisk pages or contact Wizard Developments on tel: 0322 272 908 Price: £29.99.

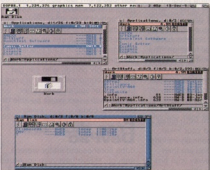
UPGRADE



▲ The new version looks pretty different from the old one.

Buried inside your Amiga is a thing called the Disk Operating System (DOS). This is part of the operating system that controls, looks after and takes care of the nitty gritty detail needed to use disks, files and drawers. If you go no further than double clicking on icons you'll be surprised to find out that opening files, closing them, moving in and out of drawers and formatting disks is tremendously complicated and it's only because Commodore did such a good job when they created Workbench that you don't have these problems.

For most common operations (copying files, formatting disks etc) Workbench provides a nice and simple menu or requester interface. However, there are a great many other things DOS can do that can't be done via Workbench, for which you need to type in commands. There are also a number of utilities available that don't have Workbench front ends. This is what the CLI and SHELL programs on the Workbench allow you to do - pass instructions to



▲ One of the neat tricks version five will be able to do is copy files to several different directories at the same time.

A viable alternative to workbench?

Directory Opus 5 seems so flexible that it could easily be used as a replacement or alternative to Workbench, and this is what the author Jonathan Potter intended.

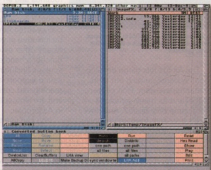
The question to be asked, however, is does it do a better job?

This really is a question that only a full testing and an indepth review can address, and you can bet that this is exactly what we'll be doing between now and when we publish the review. Our initial feelings are that whilst being considerably more powerful than Workbench, it may have lost some of the simplicity of the early version - but we'll have to see the final version to find out if this is the case or not.

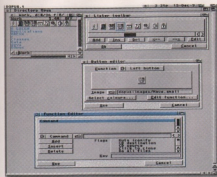
programs and directly call the routines in the DOS, ignoring Workbench in the process.

It's also worth noting that because the Workbench interface is designed to be easy and safe (so novice users can't delete something they need to keep) it often takes longer to perform an operation under Workbench than it would to simply type in a command - so for many the SHELL is often a quicker way of copying, renaming etc.

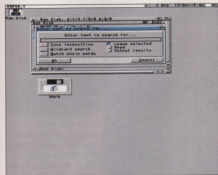
The problem is that CLI instructions are by their very nature often complex and long winded, more so than they need be. You've also got to remember long, often totally alien sounding words. Lines like 'Format drive dh0: name Thatcher NOICONS QUICK' are common. What is needed is a program that cuts out the fiddly commands, but keeps the ease of use of a 'point-and-click' interface whilst allowing access to the



▲ Changes. DOpus 5 is completely configurable, and with a little work can be made to look pretty similar to the old version.



▲ You'll be able to change practically every element of the new version, here the button bar is being edited.



▲ Although it will change a lot, the new version will still have the power of version 4, here we see the powerful text search abilities.

raw power of DOS and the utility programs that use it. This, as it happens, is exactly what *Directory Opus* offered, and in no time at all it became the standard by which all similar programs were judged, *CU Amiga Magazine* gave it 93%. In a remarkable coincidence you'll find the full version of *Directory Opus 4* on this month's coverdisk.

Now however, its author Jonathan Potter has upgraded it, and *Directory Opus 5* will be released pretty soon after you read this. And as it happens, I've spent the last few weeks playing with a preview copy of this new version. So what's in store?

Completely changed

The new version has been rewritten completely and is now much more powerful. It still retains all the functions of the old program: being able to copy, rename, and delete files, play sound and animations, view graphics, unarchive files and so on, but its look and method of operation have changed forever.

Perhaps the most significant change in terms of use is that the popular two sided display, with rows of buttons at the bottom has been replaced by a dedicated screen with multiple windows, with buttons along the top of the windows.

To copy files you now open a window to the 'source' directory, i.e. the drawer from where you wish to copy from, then open a window for the 'destination' and click on one of the small buttons along the top of the source windows. Other file-based operations work on a similar basis.

At first this seems like a massive step backwards, but if you play with it for a while you realise that this

approach gives the program massive power. Multiple source and destination windows can be opened, so you could copy a drawer from D0 to RAM, the hard drive, and the second floppy in one go.

Alternatively you can change the display so the windows don't have button bars, and instead a button panel is displayed along the bottom – much like the previous version.

Another possibility would be to have windows with buttons, and have several floating button pallets (one for drives, one for file operations, one for disk functions etc).

Then again you can change the icons along the top of the windows to your own personal preference. This approach can be taken even further, so you can close the main window, and have the program act as a backdrop on which you have icons and button banks 'left out'.

In essence, Version 5 continues the trend of the early versions of being configurable, but takes it to new levels. Not only can you configure the name of every button, and its operation, you can also edit the menus and define whether icons or text buttons used.

It's this level of configurability that gives the program its power – you can literally make it look like anything you want. It can even become the default Workbench screen – so you don't have a Workbench screen at all – *Directory Opus* becomes the front end of the Amiga.

In the test version we had, some of the configuration processes were a little cumbersome, and it was not always clear how you should do something, but most things were fairly intuitive. And best of all, because the program will come with lots of configuration files, you will be able to edit these existing files to your own tastes pretty quickly.

Multi tasking

Another major change is that the program will be internally multi-tasking. This means that you'll be able to set the program copying, formatting disks, and unarchiving a load of files all at once – it certainly sounds and looked impressive! And this is in addition to the Amiga operating system's multi-tasking functions. Using the same copy of *Directory Opus* to do several things at once certainly beats the pants off running two versions of the program. We'll just have to see how fast and reliable it proves in the final version.

The new version looks like it will have the power and flexibility to be what *Directory Opus* fans and technical Amiga users want. Whether it will retain the simplicity that made Version 4 so popular with non-technical users is a different question. This will

What's DOS?

The Disk Operating System (DOS) takes care of the interfacing between the

Amiga operating system and the disk drives and hard drives. These hardware devices have no comprehension of files and drawers, instead they only understand sectors, tracks, and bytes. It's the role of DOS to convert your desires (such as opening files, making drawers etc) into instructions that the disk drives can understand. Having done this, the DOS must also ensure that it maintains its internal tables correctly, and that the data on the disk is kept safe (not overwritten by future instructions) and also try to patch things up when things go wrong. The DOS part of the operating system is a fundamental component of an operating system, a fact evident in the names of PC and Amiga operating systems - AmigaDOS and MS-DOS. Luckily for us the Amiga has a better DOS than PCs, which is one of the reasons why the Amiga is technically superior to the PC.

largely depend upon what configurations GP Software include with the program when they finally ship it. You can rest assured however that we'll be testing it and will shortly bring you a full depth review. Will it retain its position as the Amiga best utility and score, getting more than the ninety three percent we gave version 4? Watch this space... ■



▲ *Directory Opus 4*, the old version, can be found in all its glory on this month's technical coverdisk.

Photogenics

■ Price: £54.95 ■ Supplier: Almathera ☎ 0181 687 0040



Is Photogenics the killer 24-bit package that Amiga artists have been waiting years for?
Tony Horgan investigates, with the help of some swirly colours.

Just when it looked like *AdPro* and *Image FX* had the image processing market all tied up, along comes the most innovative bit of graphics software in years. *Photogenics* is one of those programs that immediately begs questions like 'Is it the next *Deluxe Paint*?', but really it's not 'the next' anything, as it takes a different approach to all other existing Amiga graphics systems. On one hand, it's an image processor. On the other hand, it's a 24-bit paint program.

Window cleaning

The first major difference between *Photogenics* and other graphics programs, is that it works in a system of windows. The program opens up its own screen, onto which it overlays windows for each of its control panels. Multiple images can be handled with ease, each one appearing in its own resizable window. With programs such as *DPaint*, *Brilliance* and *Personal Paint*, the current screen mode is defined by the image that you're working on. With *DPaint* for example, when working on a super hi-res interlaced HAM-8 image, the working screen uses the same resolution and colours, which affects all of the tool bars and the pull down menus.

With *Photogenics*, you can set the screen mode to suit your eyesight and your monitor, independently of the images you're working on. This means you can work with all your menus and tool bars in a comfortably visible resolution,

Choose from any of the standard Workbench 3.0 screen modes, including Double Pal. Your images are viewed in either HAM-8, 256 colours or grey scale. What you see in the image windows is an approximation of the actual 24-bit image. All graphics are automatically converted to 24-bit when they are loaded in. For a better idea of what the actual image looks like, you can render it to a separate HAM-8 screen. Support for direct true colour viewing on 24-bit graphics cards (such as Picasso, Piccolo, EGS/Spectrum, Opal Vision and Rainbow 3) is currently being worked on. Almathera will be making the drivers for these boards freely available, as well as



▲ *Photogenics* has some lovely effects for you to mess around with. In this shot, moon-landers Neil, Buzz and Mike have been solarised twice.

including them with updates to registered users.

Bag of tricks

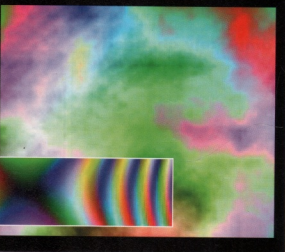
Instead of trying to emulate and out-do everyone else in the field, Almathera have started from

scratch. Along the tool bar you find all the basic drawing functions that you'd expect: solid line, dotted line, circle, rectangle, ellipse, cut and fill. Try drawing with these on a fresh blank page, and you'll be surprised to see that instead of just a solid line, you get a slightly blurred

one. This is because *Photogenics* takes a more 'realistic' approach to freehand drawing – realistic in that it attempts to emulate pens and brushes that you'd use when drawing on paper, or painting on canvas. At the moment there are 13 brush

Pure plasma

Almost as a 'bonus' feature, *Photogenics* will generate full 24-bit colour patterns. Most have a random element, and they can also be partly controlled by setting a few parameter sliders. The plasma is right up my street. Then there's the 'streaks' option, which creates a spooky kind of slimy stone effect. Select Ripples for a series of concentric circles, or Pattern for yet another plasma-type image.



Composition

Photogenics is brilliant for combining different images. Using the various paint modes, you can overlay parts of one picture onto another with ease. The variable strength of the rub-through functions allows you to gradually fade parts in and out of each other, and as it's all done in 24 bit, everything looks extremely smooth.

The first picture shown here was created from two source images. The space background was one I had previously composed from a number of sources using *Brilliance*. The ghostly fat bloke was grabbed from a video tape and cut out from his surrounding scenery. The two were then merged together by painting with the rub-through tool.

A backdrop was generated using the Streaks loader option. This was then combined with the above image.



types available, including pencil, neon, airbrush, ball pen and sponge. Pixel-perfect drawing is also possible by altering the brush parameters. The fill function is very nicely done. Instead of only filling pixels of exactly the same colour, it allows you to define a tolerance level. This means for example, that you can fill in an area that ranges from pure white to light grey, leaving any other coloured parts of the image intact. This is essential when working in 24-bits.

However, while it's quite possible to create impressive pictures from a blank page, you don't get nearly as much help in this area as you do from *DPaint* or *Brilliance*. If you're naturally talented with traditional art techniques, then the *Photogenics* style will suit you far better than the clinical pixel-orientated methods of the competition.

Paint with processes

Over 50 processes are available for you to use with your images. Processes are effects like solarise, emboss, pixelise, greyscale and line art. In the past, Amiga image processors have only worked on the whole image, or maybe specified sections of it. *Photogenics* breaks away from the norm by allowing you to paint with the effects. So, if you want to give part of your picture an embossed effect, you select Emboss as the paint mode, and then draw over

the area you want to change. If you then decide you didn't want to emboss it after all, but you think a line art effect might work better, then all you do is switch the paint mode to line art. The part you just embossed is changed to line art before your eyes! Once you're happy with it, you can click on 'fix', and the change is written to the actual image in the internal 24-bit buffer. This throws up plenty of opportunities for experimentation.

Loaders and savers



▲ If you have enough memory, *Photogenics* lets you work on a number of images at the same time.

Most image file formats are supported for loading and saving.

Supported load formats include IFF, GIF, JPEG, QuadAnim (for use with Video Creator), VLAB, QRT and BMP. A novel off-shoot of the loading section is the collection of image generators that create exotic patterns from a few algorithms. See the Pure Plasma panel for some examples. There's also a screen grabber available from this section. As for saving, you're offered IFF-Deep (a mutation of the standard 24 bit IFF standard), ILBM, JPEG, ASCII Art, BMP, HAM-8, Opal Hires and Lo-res, PBM, Picasso-II, QRT, RAW and SCULPT. The modular design of the load and save section allows for easy addition of further loaders and savers as and when they are written.

Conclusion

Photogenics is a brilliant program, in many ways far more powerful than anything else available. It's particularly useful for anyone who works across more than one computer format, which increasingly the case with professional computer graphics. The range of loaders and savers gives it compatibility

High end requirements

To run *Photogenics* you'll need an AGA Amiga (an A1200 or an A4000).

Although the basic requirements state just 2Mbs of RAM are needed, if you're to get anything like the full potential from the program, you'll need extra RAM and a hard drive. You won't fit many 24 bit pictures onto a floppy disk, and with only 2Mb of RAM, some of the features will be inaccessible.

with lots of different systems. It's by no means the complete image processing package. Neither is it the answer to all your image creation needs. However, added to an existing system of *DPaint/Brilliance* and *AdPro/Image FX*, it will increase your creative potential enormously. Anyone designing graphics for use in Amiga games and applications will still need the basic functions and low resolution support of a traditional paint program. If your main use will be DTP or high-end video work, then *Photogenics* is just the job. Others may have set a £100-£200 price tag on such a powerful program, but Almathe has decided to put *Photogenics* out at five pence under E5!

If the pictures and text on these pages haven't already convinced you that *Photogenics* is the biggest thing in Amiga graphics since *DPaint*, then I don't really know what else I can say, except that *Photogenics* is the biggest thing in Amiga graphics since *DPaint*. Convinced now? Good. ■

Photogenics

A500	system requirements: Workbench 3.0, 2Mb Chip RAM, AGA Chipset. Recommended requirements: 4-5Mb RAM and hard drive.
A500+	ease of use: 90% A window-based drag and drop interface is combined with means and tool bars in good effect.
A600	performance: 91% Fast, neat, effective, and stacked with original and unique features.
A1200	value for money: 92% You could hardly ask for a lower priced professional graphics package.
A1500	OVERALL: A program that lives up to all expectations.
A2000	91%
A4000	

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Personal Paint 6.1

■ Price: £59.95 ■ Developer: Cloanto ■ Supplier: Ramiga © 0690 770304

Personal Paint has just reached version 6.1 at a critical time for Amiga graphics. Tony Horgan wonders whether its got what it takes.

It's all very well going on about the wonders of *Image FX* and *Photogenics*, with their 24-bit graphics handling and flashy high-end features, but not every Amiga artist needs to emulate a graphics workstation. And besides, until the Amiga is back in production, there are still a hell of a lot of non-AGA Amiga users with a need for powerful



▲ The centre can is the original image. The one on the left has been passed through the watercolour effect, while the one on the right has been subjected to the edge detect treatment.

software that's compatible with lower-spec machines. Check out these system requirements:

Kickstart 1.2, 512K RAM and 1 floppy drive! Surely it can't be any good with those basic requirements? Wrong!

Personal Paint 6.1 covers just about all the bases to some degree. It's primarily a paint program along the lines of *DPaint*, but it also now includes animation facilities. Then there's the image processing side of things, which has always been one of the program's attractive features. Although you can use it on any Amiga from an A1000 or A500 up to an A4000, it also supports high end users, with optional automatic re-targeting of the display to 24-bit boards.

Animation action

When compared to the animation features of *DPaint* or *Brilliance*, *Personal Paint* can't

offer nearly as many. However, it does have some definite advantages. The best animation feature is the storyboard. This lets you view anything from 1 to 50 frames at once. To alter the 'zoom' level of the storyboard, just hold the right mouse button and drag it in or out. Simple! *Personal Paint* is also very good at converting entire animations into different resolutions and numbers of colours. Try getting *DPaint* to do that! There are also plenty of optimisation options for saving, depending on whether file size or playback speed is most important.

Virtual memory

There are times when you'll want to perform an operation, but don't have enough free memory. In this case, you can use the virtual memory option. This stores 'inactive' parts of image data in a temporary storage area, such as Fast RAM, a hard drive, or even a floppy drive.

Image processing is another of the program's main attractions. The usual effects are on offer, such as blur, emboss, edge detect, dither, negative, randomise, rub through, sharpen, tint, texture and watercolour. Most of these come in a number of variations. The watercolour and emboss options are especially impressive. Anyone

Major new features

- Animation
- Virtual Memory
- Creates 3D Stereograms
- HAM-6 & HAM-8 viewer
- Autoscroll painting
- JPEG loading
- Faster operation

into those 3D stereogram pictures will be pleased to find the stereogram-creation options. These allow you to take a still picture or an animation, and convert it into stereogram.

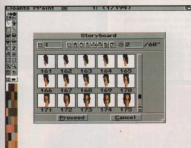
JPEG's can now be loaded, unfortunately there isn't a JPEG save option, as JPEG is a 24 bit image file format, and *Personal Paint* works in no more than 256 colours. However, it can save in a PCX, GIF and IFF formats.

Conclusion

Although *Personal Paint* may not have as many features as its main rivals *DPaint* and *Brilliance*, it does have some significant advantages of its own. Speed is one, and compatibility is another. It's good to see that there are still people developing software with the massive Kickstart 1.2 to 2.0 user-base in mind. I'll certainly be using it extensively for its animation control features, image processing, and maybe even to render the odd stereogram animation. ■



▲ The emboss effect works best on line art, but can be used on anything.



▲ Here we see the storyboard in action. The number of frames in view can be altered from 1 to 50, with a simple mouse-drag.

PERSONAL PAINT 6.1

A500	system requirements:
	Kickstart 1.2 or higher, 512K RAM, 1 floppy drive. Recommended: 2MB Chip RAM, hard drive, AGA chipset.
A500+	ease of use: 85% Very easy to use as it uses the same hot keys as <i>DPaint</i> and <i>Brilliance</i> , with simple menus and icons.
A600	performance: 80% Not so fast with features, but what it does, it does very well.
A1200	value for money: 82% Sensibly priced within range of its competitors.
A1500	OVERALL
A2000	An attractive option particularly for any non AGA artists.
A3000	84%
A4000	

Win One Of Five Copies of Photogenics

50 runner up T-Shirt prizes

You've read the review, now enter the competition and you could win one of five copies of this amazing program and there are 50 Photogenics T-shirts for the runners up.

Photogenics is the feature-packed image processing and paint program from Almathera that can do just about anything you like. Amongst its more impressive features are:

- Numerous special effects such as emboss, sharpen, antique. Pick them up as a brush and paint them on.
- The ability to edit multiple images, each in its own resizable window.
- Full 24-bit editing.
- Loads and saves IFF, GIF, JPEG and other format files.
- Numerous natural paint tools - chalk pastels, felt tip pens, crayon etc.

Incase you haven't read the full indepth review of this brilliant program turn to page 88 now. To enter and hopefully win one of five copies of the software or one of fifty T-shirts, write the answers to the following questions on a postcard and send it on a postcard to: "Photogenics compo", CU AMIGA Magazine, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU'.



Rules

1. No employees of EMAP Images or Almathera can enter.
2. The editor's decision is final, no correspondence will be entered into.
3. Only one entry per person is allowed.
4. The closing date for entries is February 19th 1995.
5. Competition entries will only be accepted by post.
6. The winners will be notified by post.

1: How much is Photogenics?

2: What score have CU Amiga Magazine given it?

3: How many image processing brush types does it have?

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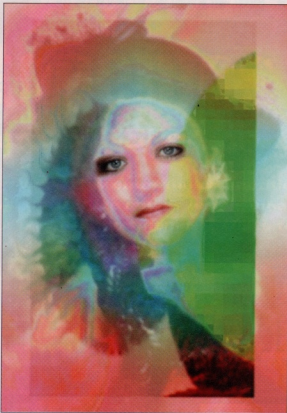
Image FX 2

■ Price: £149.99 ■ Developer: Nova Design ■ Supplier: Wizard Developments ☎ 0322 272908

Andy Leaning checks out the hottest release of the Winter, ImageFX 2 - a program with more death moves than Mortal Kombat!

ARexx and other programs

In addition to the vast number of extra features provided in the program, *ImageFX* also has a *ARexx* port and a companion program - *CineMorph* for creating much popularised morph effects. The *ARexx* facility is also used to provide a collection of extra capabilities, including a batch processor (allowing the same effects to be performed on multiple files automatically rather than loading each file, manipulating and saving it). These programs build on the basic power of *ImageFX* and make it relatively easy to carry out what would otherwise be very complex operations quickly, and after the initial learning curve will save time and effort.



▲ *ImageFX 2* is all its glory, this picture demonstrates some of the power that the program provides, showing composition and paint effects.

The fight for the title of image processor king is getting nasty! Earlier this year ASDG (now called Elastic Reality) unleashed their upgraded champion - *AdPro 2.5*. Now Nova Design have released *ImageFX* version 2, and just to set the cat among the pigeons, *Photogenics* (page 88) has hit the streets too. The resulting battle looks set to be a fight bigger than any seen in beat 'em ups like *Mortal Kombat II*. The question is

does *ImageFX 2* and its huge selection of death moves, sorry features, have what it takes to rip the soul out of *AdPro*, or is it a waste of disk space?

Looking at the specification sheet of *ImageFX 2* alone is enough to set the pulse of graphics fans racing. It supports more new features than an aging Hollywood star after a visit to a plastic surgeon, and many of these are literally state-of-the-art in the visual effects and image process-

ing world. And even better, it builds upon these with a sophisticated array of new gimmicks to make it friendlier and easier to use.

But enough of this talk, you want facts. Firstly the look and feel of the program hasn't changed much, it retains the distinctive pallet and tool bar from where you select tools etc, and at first glance there are no major differences. This impression doesn't last long however. Throughout the program, subtle changes have been made to improve the design and functionality. Most requesters now have thumbnail preview screens in them, so you can select files and brushes visually. These preview versions and thumbnails take time to be displayed however, but you can turn them off to speed up performance.

The preview ability needs some explaining. Imagine you wanted to add a lightning bolt to a picture. You'd call up the lightning bolt screen requester, set the parameters and then to see what it looked like click on a preview button.

Doing so will fill a small box on the right hand side of the screen with a miniature representation of the lightning bolt. Change a parameter and click on preview again. Once you're happy with the preview you can click on the OK button and the full resolution version will be rendered on to the main screen. In short the preview options allow you to try out any effect quickly without harming the main image.

Also worth noting is the online help. With a program of this magnitude I expected to be quickly lost amongst a wealth of menus and requesters, but by simply pressing 'HELP' on the keyboard you've got access to a comprehensive on-line help system describing practically every element of the program.

Another nice touch is that brush/region controls have been improved. You can now select an area of the picture using the usual selection tools of box, oval, polygon and freehand, and select by colour (magic wand type effect) but

you can now also add or remove areas to and from this selected area – smart!

These features all make the program more user friendly and functional by making it quicker and easier to apply effects and manipulate your images. What really makes this version stand out however are the new image processing and distortion tools. *ImageFX 2* has bucket loads of these, and many of them are at the cutting edge of image processing on all platforms, and far in advance of anything seen on the Amiga.

You can create lightning bolts (see 'A Bolt From The Blue'), radial stars, and lens flares, and add them to an existing picture. The lens flare creator is particularly powerful allowing you to set not just the brightness and colour of the flare but also the number and type of artifacts (ie the types of reflection caused by the supposed camera lens). Also included is the ability to create swirls, pond ripples and waves, map images onto spheres (including adding a reflective highlight to the globe) along with numerous other distortion tools. You can also alter the image to look as if it had been created in either a classic paint style or with a particular painting/drawing tool. Amongst the possibilities are Picasso, Impressionist, and Charcoal sketch.

Compose yourself

Image compositing (combining two or more images in a variety of different ways) has also undergone a upgrade. Composition is a fundamental tool of any image

processing program, and the more ways you can combine two images the better.

ImageFX has always done fairly well in this respect, but the new version adds five new techniques. In general, composition techniques all work by examining the colours of each pixel (specified by numerical values) from the two originals and then applying a mathematical operation to these values, combining them in some way or simply replacing one with the other. Version 2 now has an HSV matte operation which allows you to specify which colours will be replaced using hue, saturation and value parameters. There's also a minimum/maximum approach where the pixels with the highest and lowest values are used in the final version, and a multiply/divide system where the pixels are multiplied and divided with each other to give the final picture.

Hmmm ...

On the whole *ImageFX 2* proved a solid, well thought out and, during the test period, trouble-free program. However I have a few lingering doubts. Firstly and most obviously *ImageFX* is a huge program with masses of features - and this

is naturally a big point in its favour. However, as a result of having so many features it can at times be difficult to locate the button for the feature you want - is the Lightning bolt under the Distort, Effects, Hook, or *Aresx* button? As you gain more experience with the program this problem will become less apparent but it does increase the learning curve.

Another problem is the difference between the previews and the actually rendered results. This is particularly relevant with the lightning bolts - many of the previews make the lightning bolts look

like a spray coming from a fire extinguisher, if you can imagine that. Luckily the actual lightning bolts are far more impressive.

The single biggest negative of the whole program is the undo operation. It seems that only basic editing and other simple operations can be undone, the larger and more time consuming functions are un-undoable (if you'll forgive the English). The lack of an undo function for much of the program forced me to mark *ImageFX* from what would otherwise have been a very high score. To be taken seriously a program-wide undo



▲ Lightning bolts away: here I've added three lightning bolts to a previously rendered Vista landscape. Using different sized lightning bolts creates the impression of depth.

from here you can change the levels of colour in pictures - increasing the amount of red in a face for instance.

Click here to combine two or more pictures with a powerful range of composition tools.

Rotate, flip or mirror pictures to your hearts content by clicking on this button.

Clicking on this button allows you to resize and crop the picture buffer.

The main action buttons. Clicking on these buttons will change the overall type of actions available to you. Scanner allows control over input devices. Palette controls pen colour etc. Toolbox is this toolbox. Print determines printer options, the last four ... eh, load, save, quit and call up preferences.

This strip of buttons contains the drawing tools icons. Double clicking on these allows you to specify the action of these tools, ie pen size, fill sensitivity etc.

ImageFX works with multiple buffers (pictures). Clicking on this button allows you to swap them around, and create new or delete them.

Several effects are hidden here, including sharpen, motion blur and edge detect.

'Analysis' and alter the colours of your pics from here.

Some pretty fancy effects are hidden under here: dream, and swirl for instance.

One of the more fun menus where you add lightning bolts, lens flares and more.

The status bar shows how long you've got to wait before the current operation will be finished. The small bars fill up from left to right as operations progress.

To apply global colour changes click here. You could for instance change all reds to blues.

If you've defined a brush come here to copy it to a buffer, save or maybe load another brush.

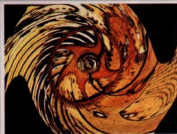
Alpha channels allow the selection of part of an image for further processing.

Here you can call up other programs like CorelDraw.

A number of *Aresx* macros are supplied to perform long winded or complex operations.



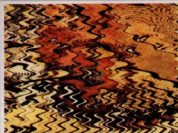
▲ OK let's begin let's take an groovy image like this one from the Alternative 3D Textures collection and see what we can do...



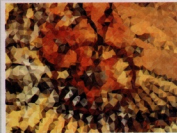
▲ Let's try the swirl operator and as we can see it acts as if the image has been spun from the centre outwards. Like void.



▲ Now about perspective rotate. Image FX's 3D rotation capabilities are outstanding, and you can also scale and resize in this mode!



▲ How about going into dream operator for that special dream-like effect. It's just dreamy.



▲ Then now for something a bit new age -- a crystal effect. This adds a crystallised type look to the pictures. I've gone over the top here.



▲ Finally, you can use this highly useful feature which takes a texture and maps the image onto it.

must be implemented.

Perhaps the last problem is that of speed. *ImageFX 2* is a very powerful program and as such really needs serious hardware, but even on powerful Amigas it's quite slow. Some of the distortion effects can take a seriously long time. Taking a 768 by 576 image and applying an impressionist *Paint-FX* effect took

five minutes on our accelerated A4000 040 -- life is too short to try this on a stock A1200. However this isn't a fault of the programmers but instead a sign that you are trying to do too much with the hardware. Its unlikely other software will improve on the speed of this program. If you want faster responses you'll need a faster system -- and it's worth getting one if you intend to use *ImageFX 2*.

A bolt from the blue

The new version has a built-in lightning bolt generator, and it doesn't involve making changes to your Amigas circuit board! The number of times I've needed to have a picture of a lightning bolt can be counted on one hand, but it's still a very useful capability. It's slow at times, but the results are impressive.

Lightning bolt creation involves

setting a number of variables which act as limits on various attributes of the lightning bolt, the program then creates a random bolt working within the entered parameters. This ensures that you can determine pretty much the type of bolt created, but each can be different from the last. Amongst the variables available are the percentage chance that a fork will appear, the minimum and maximum angles of any forks, and the base colours.

Potential uses of lightning bolts include creating a false impression of size and power for electrical equipment (used to great effect where the landing craft lands amongst the exploding terra-forming station to pickup Ripley in *Aliens*), to recreate a feeling life-giving energy in sinister science labs (a la *Frankenstein*) or adding an element of untamed electrical forces to a science fiction setting (as in the scene where the human arrives in the 20th century in the *Terminator*). This effect really comes into its own when used alongside a 3D rendering program (such as *LightWave*) and a landscape creator (*Vista*) to create futuristic settings. Several lightning bolts and a typical composition are shown below.

The only failing I found was that I could see no way in which to make a lightning bolt tail off or

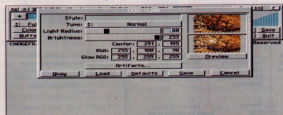
fade away at the end, instead they just stop. This is okay for ground strikes but when creating bolts that don't hit the earth but end in mid air, the results look odd.

So...

ImageFX 2 is a corker. I can hear *AdPro*'s spine being removed now! The vast number of distortion capabilities and special effects ensure this is a program that anyone who's serious about graphics on the Amiga must have. If *Elastic Reality* are to stay in the race for Amiga image manipulation they'll need to get a new version of *AdPro* out soon. ■



▲ The thumbnail previews on the loading requester: although the quality of the thumbnail images isn't brilliant it still helps you quickly locate the image you want.



▲ A typical requester with a preview box, this one shows the less flare option in action.

IMAGE FX 2

A350	System requirements:
A350+	Workbench 2 and above and 4Mb of RAM.
A600	Case of use88%
A1200	Very easy to get to grips with, however the sheer number of features may prove a little daunting.
A1500	performance90%
A1500+	Amazing, but it needs powerful hardware otherwise you're in for a long wait.
A2000	value for money92%
A2000+	Expensive yes, but look at the features list very good value!
A3500	OVERALL
A4000	The king of Amiga image processing, but very demanding.
	88%

Termite

■ Price: £39.95 ■ Developer: Oregon Research ■ Supplier: HiSoft ☎ 01525 718181



New-comers to Comms usually have one big problem: after they splash out on a modem what software should they use with it? Modems usually come with software for the PC, not the Amiga, which can be extremely frustrating.

The normal way of getting Comms software is to download it from a Bulletin Board or from across the

Internet, but of course this assumes you already have some Comms software to start with. The alternative is to order a disk from a public domain library and hope you can figure out how to use it.

Or you could buy some. Which is exactly what *Termite* is – a commercial Comms package. *Termite*, however, is different from Freeware or Shareware because (apart from the fact that you have to pay for it), it comes in a box, with a very informative and well-written manual and has a host of invaluable features.

The facts

Any Comms software, whether free, shareware or commercial, all shares the same way. And *Termite* is no exception. At its simplest level, it works like this: the text you type in

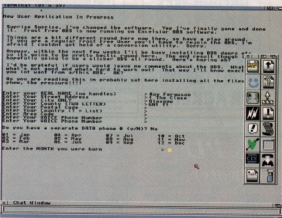
is sent to the modem, text from the modem is then displayed on the screen and files can be upload or downloaded using special binary protocols.

There's a bit more to it than that obviously: telephone books need to be kept, screen modes need to be defined – all that stuff. And in this respect *Termite* comes out very

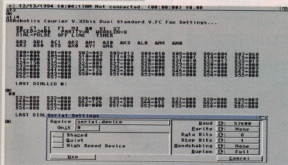
well when compared to other Amiga Comms programs, and certainly doesn't loose out, even to the best. It even manages to bring a few new options which aren't available from any other Amiga program.

First of all there are the buttons – gadgets, which are on-screen in their own window, which can be moved around or re-sized at will. The buttons are linked to a specific *Termite* feature, but you can define exactly what that feature will be. It could be to open the phone book, or it could be to upload a file: it's up to you.

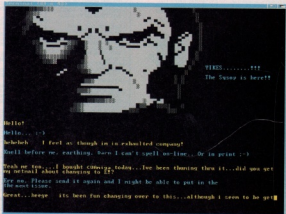
You can even save a picture or a brush from *Deluxe Paint* or *Brilliance* (or in fact any program that saves IFF image files) and make it a button. No matter what screen resolution you use (including



▲ *Termite* in action. Notice the floating button bar with options all ready to click on. The chat window at the bottom of the screen means you can type in text, correct it, and then send it: great if you can't type.



▲ With a fast computer and fast modem you can send data at about 28,000 bits per second. Remember, the modem may work at 28,000, but error correction and data compression can double that.



▲ The support for ANSI graphics (as used extensively by BBSs) is very good. Looks like Roy should have used the chat window here.

new AGA only modes) *Termite* looks great.

Termite's dialling list feature means that each board can have a list of associated numbers. If the first one is busy, *Termite* moves onto the next, and so on. For busy systems, this can be a great anti-frustration device.

Another unique feature of *Termite* is the dock icon that opens on the Workbench: the little *Termite* face sits there, and any

program or file you drag and drop into it gets added to the list for uploading. Useful.

Like the shareware *Term* program, *Termite* uses external terminal modules, which means you can add better and better terminal emulators as they come along. The same goes for the file upload/download protocol system, which uses a library to provide the best Z-Modem system currently available. And other protocols come along the new libraries can be used.

There is a full *ARexx* port, which means *ARexx* commands will allow complex scripts to be written to automate dull or tedious processes. As an exercise in stupidity I used an *ARexx* script to instruct my computer at work to dial me at home at an exact time. The number of rings could be used to inform me that a ray trace had finished, and no call at all would let me know something had gone wrong.

Conclusion

Termite is a great program. If it was shareware I would have no hesitation in recommending that you download it and try it out immediately. But it's not free – it's a commercial product, which places an entirely new light on the matter. The saving grace is the fact that the manual is extremely good, and the unique user-friendly features will mean that even a novice could get to grips with the whole moderns and Comms business. HiSoft's David Link told me that *Termite* would be shipping with buttons defined which would automatically dial into the common Bulletin Board Systems, which can only be applauded.

For the more advanced aficionados out there, the clever customisation options are intriguing, and permit the ultimate in dream terminals to be constructed easily. ■

TERMITE

system requirements:
1Mb, Kickstart 2.84 or better. Second floppy or hard drive recommended.

ease of use 92%
The on-screen buttons are a great idea – making it really easy to use.

performance 90%
Works perfectly on any Amiga, although on A1200 or better is required for faster modems.

value for money 78%
The competition is essentially lost, as *Termite* needs to be good.

OVERALL
Excellent Comms program – especially for new users.

88%

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Each disk is compiled from a studio recorded master and is supplied on the Amiga at twice the sample rate of 192. They are compatible with all PC and commercial tracker and sequencer programs, and are highly recommended. There are a lot of sample libraries available but this one is absolutely unrivalled. Amiga Computing (1985). The collection of disks shows how it should be done. The commercial instrument samples are the best I've heard on the Amiga. CUI Amiga 1986. You want some high quality and wide ranging sounds to use in your compositions? Then this is the place to look! Rating 87% Amiga Format Special A482. N.B. no of samples in brackets

017 AFRICAN	Talking Drums, Maracas, Chants etc (35)	016 FRANCES	Chorus girls, with strings, 19 (16)
020 ARABIAN NET	Sitar, Bansuri, Chant etc (19)	007 ETHIOPIAN	Cello, Oboe, Viola, Saxophone etc (21)
015 BACH PIANO	Sitar, Bansuri, Chant etc (19)	021 EGYPT STRINGS	Arabic & Egyptian (19)
008 BANGALAY	UK, Sax, Banjo, Flute, Piano etc (37)	022 CHAGGLES	Mixed Chorus, with Sax & Synth (16)
006 BASS EAST	Tobacco, Sitar, Banjo, Koto etc (21)	013 CHAGGLES	Chorus & Drums (17)
009 BLOOMING	Banjo, Chorus, Banjo etc (21)	014 BELLS	Real & Synth Brass Chorus & Strings (20)
010 BLOOMING	Indian, Chorus, Chorus etc (21)	015 BELLS	Acoustic Expressions, Saxophone etc (20)
005 AMERICAS	Koto, Banjo, Piano, Pipes etc (20)	016 F1 F1 PC MUSIC	Up-tempo effects, strings, 19 (16)
004 AMERICAS	Power Tunes, Drums & Bass, Sitar, Banjo etc (38)	017 S&B MUSIC	Various styles, pop, instrumental etc (24)
012 CUBAN GT	Bass & Drums, 19 Hips, Chorus & Tunes (31)	018 S&B MUSIC	More pop and instrumental melodies (19)
011 AMERICAN PIANO	19 Hips, 19 Hips, Chorus & Tunes (31)	019 S&B MUSIC	Various styles, strings with effects (19)
013 LATIN PIANO	Tobacco, Chorus, Chorus, Chorus etc (107)	020 TANGO 2	More of the above (19)
014 LATIN PIANO	Alto Sax, Flute, Flute & Chorus etc (107)	021 WOODWIND	Woodwind, Brass, Chorus etc (19)
015 LATIN PIANO	Alto Sax, Flute, Flute & Chorus etc (107)	022 WOODWIND	Sax, Trumpet, Brass, Chorus etc (19)
016 LATIN PIANO	Alto Sax, Flute, Flute & Chorus etc (107)	023 WOODWIND	More of the above (19)
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074 LATIN PIANO	Alto Sax, Flute, Flute & Chorus etc (107)	081 WOODWIND	More of the above (19)
075 LATIN PIANO	Alto Sax, Flute, Flute & Chorus etc (107)	082 WOODWIND	More of the above (19)
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078 LATIN PIANO	Alto Sax, Flute, Flute & Chorus etc (107)	085 WOODWIND	More of the above (19)
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080 LATIN PIANO	Alto Sax, Flute, Flute & Chorus etc (107)	087 WOODWIND	More of the above (19)
081 LATIN PIANO	Alto Sax, Flute, Flute & Chorus etc (107)	088 WOODWIND	More of the above (19)
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Scene

ASSASSINS GAME 209

game compilation

If you like simultaneous two-player games, take a look at this. It's the latest in the Assassins game compilation series, and includes three games to be played with a friend: *Trick or Treat*, *Space Taxi* and *Vector Tank Battle*. *Trick or Treat* is one of the most impressive 3D texture-mapped adventure games available for the Amiga. It runs at quite a speed, even if the two windows are on the small side. *Space Taxi* is a cute variation on the *Thrust* theme, in which you play a space taxi driver, shuttling passengers from one platform to another. "Hey taxi!" they shout. Pick them up and they'll state their destination: "Platform 2 please!". Good fun. The last game is a simple 2D tank battle, like the old Atari VCS game. Definitely one of the better Assassins disks.

Available from: Online PD, 1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX.
Tel: 01704 834335. BBS: 01704 834583.
Price: £1.50 including P+P.



88%

DO YOU BELIEVE WHAT YOU SEE?

A1200 demo

For the main attraction in this two-disk demo, you have to sit through quite a lot of rubbish.

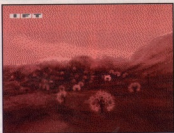


The attraction in question is a full-screen low resolution

fractal flight around a mountain range. OK, so you've seen plenty of these before, but this is a particularly good example, even if it is pretty chunky and colourless.

There are some nice little cartoon pictures thrown in from time to time, and a looping tunnel animation, but nothing much else to grab your attention, apart from the music, which is a decent, if dated techno rave thing.

Available from: Online PD, 1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX.
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Price: £2.25 including P+P.



▲ Take your seats for a super-speedy flight around a fractal-generated mountain range. Sicknesses can be found under the seats.



70%

LOTTERY WINNER AGA lottery prediction



This has got me a bit puzzled. As far as I see it, there's no way of predicting the outcome of any particular draw of the

National Lottery. It's as good as random every time, right? Well this program seems to dispute that, as it attempts to predict the numbers of future draws. You enter data from previous results, and it works out its predictions from that. I suppose there's just as much chance of winning with this as there is by pulling numbers from a hat, so if for some reason you find it tricky to cross out six numbers on a slip of paper (you poor thing) then give it a go. My rather generous rating is based upon the assumption that it can't actually predict the result any better than any random number generator. If anyone uses this and wins the jackpot however, I'll eat my words.

Available from: Online PD, 1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX. Tel: 01704 834335. BBS: 01704 834583. Price: £1.50 including P+P.

40%

MOVIEZONE

disk magazine

I instantly warmed to this movie-based diskmag when I heard the 'Strings of Life' style piano house backing music, short as it is. As for the mag itself, it's a standard issue point-and-click collection of text documents with reviews of *Forrest Gump* and *Jurassic Park*, and *Cold Dog Soup*, which was a film shown on Channel Four last year. That's about all you get in this first issue.

The rest of the documents are of the 'We want contributions' type. The compilers say that they think they've got enough articles for a full issue, but to be honest, if this was on paper, it would hardly fill a couple of sheets of A4.

With some more features and graphics, this could be an interesting diskmag. As it is, this first issue is hardly worth bothering with. Interested contributors to future issues should contact the address below.

Available from: Philip C Swales,
26 Campbell Road,
Hartlepool TS25 3BB.
Price: £1.40
including P+P.

40 %

TRAITOR

A1200 demo



If demo coders must insist on including long tedious messages in their productions, I'd appreciate it if they'd separate them from the good bits, like at the end of example - not that the coders really give a toss what magazine reviewers think, but I'm sure others share my opinion. Anyway, this one finally gets past its text intro and pops up with a rotating cityscape made from coloured dots.

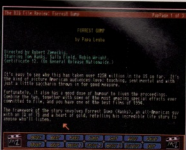
A tune very similar to the end part of the *Switchback* (last issue) accompanies the graphics. After a pleasant still picture, there's a selection of boring old-style vector effects, and before you know it, it's time for the credits and contacts. Did I miss something?

Available from: Freestyle PD, 18 Woodside Way, Short Heath, Willenhall, West Midlands WV12 5NH.
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55 %



▲ There are disk magazines for all sorts of different subjects. Movie fans may find *MovieZone* is worth a look, although there's not much to it.



▲ Think you could write film reviews and articles as good or better than this? Why not send some in to the address on the left.

PUB DARTS

game

There's one problem that always faces programmers of darts games: how to make it difficult to aim, whilst retaining an element of skill. If all you had was a simple mouse or joystick controlled cursor, it would be ludicrously easy. *Pub Darts* goes for the old 'wobbly hand' trick. You get a disembodied hand to move around with the mouse, but it jiggles around as if it's just necked 10 gallons of strong black coffee. Not so much a drunken sway, as a nervous twitch.

You can set the amount of hand wobble by selecting a harder or easy skill level. If you score one of the popular scores (60, 100, 140 or 180) you get a sampled MC speaking your score. It's quite good fun actually, and I don't even like the real thing.



Recommended to all fans of the game. Available from: Saddle Tramps PD, 1 Lower Middle Close, Goldthorpe, Rotherham S63 9BY.
Price: £2.00
including P+P.

80 %

MICHEL RIGO ANIM

animation



This is a typical morph animation, which changes from a passport mugshot into a picture of a little dog. You'd think that there would be better than this around. The worst thing about it, is that it takes up almost an entire disk. There's more to morphing than this. At least it's cheap!

Available from: A1200 Only PD, BJ Cowdall, 23 Barn Way, Cirencester, Gloucester GL7 2LY. Price: £1.40
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50 %



▲ From boy to man to dog with lots of facial hair.



BAM BOOZE

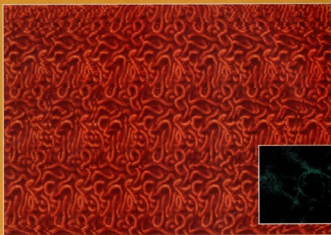
demo

Pumping its way into an early grave, this euro-techno stomper is a sound and vision combo that concentrates mainly on the music rather than graphics. Visually, it follows the strange trend of recent demos by including adverts for major international companies, flashing up the logos of Scotch tape, Coke, Sony and Canon, while the background is made from strobing 'garbage' (like the graphics you sometimes get when your Amiga crashes). The music starts off well, but doesn't do anything new after the first minute or two, which is a little disappointing. Still, not bad for a bit of instant techno gratification.

Available from: Freestyle PD, 18 Woodside Way, Short Heath, Willenhall.

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74 %



ARTIFICE

A1200 demo

There's always been something a bit special about 'realtime' effects in demos. Anyone can set *Imagine* rendering for a week, and then play back the results, but the test of a true demo coder is one who can get the same results without the week-long rendering times. This point is taken a bit far sometimes, like the real-time rendered

▲ Stare at this mass of needles for long enough, and you might be able to see a 3D image in there somewhere, but don't hold your breath!

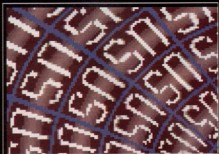
stereogram at the start of this demo from TRSI. Next time can we have it pre-rendered please? It would be a lot quicker and easier! Anyway, apart from that, this is fun demo with quite a variety of the current in-vogue effects, including voxel landscapes, bitmap warps, and some good static pictures. Available from: Freestyle PD, 18

Woodside Way, Short Heath, Willenhall, West Midlands WV12 5NH. Tel: 01922 710985. Price: £1.50 including P+P.

81 %

YUL BRINNER WAS A SKINHEAD

A1200 demo



Well he didn't have much in the way of hair but I don't remember seeing him down at Chaises of a Saturday afternoon in his boots and braces. As usual, the name has nothing

to do with the content of the demo, apart from caricature of Mr Brinner at the start. Most of the disk is filled with neat swirly patterns that include a good rotating tunnel (of course!), some vectors (of course!), and some clinically drawn still pictures (of course!). It's also got a rather abrupt end, and nothing much toespecial.

Available from: Freestyle PD, 18 Woodside Way, Short Heath, Willenhall, West Midlands WV12 5NH. Tel: 01922 710985. Price: £1.50 including P+P.

70 %



WAKE UP!

A1200 demo

I liked this one from the start, with its Tubular Bells-ish soundtrack, coupled with a fast breakbeat and techno synth stabs.

On the visual side, it looks quite old at first, with chequered floors and copperlist effects. Soon enough it brings on the 'I could program *Doom* on the Amiga if I

wobly patterns that are up next are just the job when you fancy something a bit, well, twisty and wobbly I suppose.

Available from: Freestyle PD, 18 Woodside Way, Short Heath, Willenhall, West Midlands WV12 5NH. Tel: 01922 710985. Price: £1.50 including P+P.

79 %

wanted to' section, in which you're taken on a walk around a texture-mapped Lego land maze. Now this is more like it: the twisty

PD Utilities

Never one to be short of words, CU's PD motor-mouth André Digard steps once more into the breach that is two empty pages in the mag and fills them with top low-cost software.

VARIETIES OF PD

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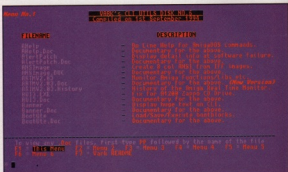
Licenseware

You cannot copy the software and all profits go to author.

VARX VI cli utilities

This is a far cry from the normal run-of-the-mill utilities disk. Why? Well it's all designed to be run from the CLI. There are certainly enough programs here to keep most utility hunters happy. The disk is very well laid out with a keyboard-driven menu system. This is the Northern Amiga Users Group strutting its stuff.

There's a total of 48 utilities on this disk, some of which are really neat, and nearly all of which are genuinely useful. Here's a little taster: *Amiga Real-Time Monitor*, a program which shows every kind of internal event; *Banner*, to create large text in the CLI; *Guide2Doc*, which converts AmigaGuide files into normal text files; *HalfInHalf*, a brilliant program which makes



machines with 2Mb of chip RAM pretend to have 1Mb of fast and 1Mb of chip RAM; *Text2Guide*, the opposite of *Guide2Doc*, it turns text files into AmigaGuide files. The list goes on and on.

This disk is a worthy addition to any collection, whether you're

technical-
ly literate
or a rela-
tive begin-
ner. If

you're one of the latter, you should find this disk an interesting starting point in getting further into your Amiga.

Available from: Roberta Smith
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85 %

LION KING clip art

This has to be a first. According to the blurb in the text file on this disk, this clipart is not only shareware but Disney shareware. That may not seem strange until I prompt you with the following question; just how many big multinational companies have you heard of releasing shareware? This is simply an outrageously good idea. If more film companies were to put character clips, scenic backdrops or even just promotional pictures onto disk as shareware, the whole world would be at serious risk of becoming a more fun place to be. Imagine being able to put a clip of, say, Indiana Jones on your personal letterhead (at the moment you would be inviting litigation).

The clips provided here appear to have been taken from the actual animation cels rather than cut from the film. They haven't been modified in any way, which makes some of them pretty untidy, but they're fun. There are pictures of Simba, the lead character, both as a cub and fully grown; Scar, the bounding cad of an uncle; Mafusa and Sarabi, Simba's parents etc. Most of the characters are here, spread across 35 clips. All the clips have a plain white background which makes life easy when importing them into various programs. I hope this is the start of a trend. It may not be the greatest clip art disk ever, but if you can be convinced to pay the shareware fee, who knows, maybe it'll snowball. Available from: KEW=II

Software, PO Box 672, South Croydon,
Surrey, CR2 9YS. Tel: 081 657 1617.

Price: £1.50
including P+P
(Minimum order
two disks)

80 %

RELOKICK 1.4A downgrader

Some old programs can be a real pain, especially if they only work on an old machine, one with Kickstart 1.3. While, needless to say, that's not a problem if you have one, if you have Kickstart 2 or above it can be a real headache. The scenario runs something like this: whilst at a car boot sale you discover some absolutely classic stuff for sale only to find that it won't work on your A1200 when you get home. *ReloKick* goes a fair way to providing a solution. What it does is make your machine pretend it has Kickstart v1.3. OK, so it's not going to set the world on fire, but this disk can certainly prove useful, if you are intending to upgrade from a 1.3 machine, this disk is almost essential to keep any old disk collection working. There's not much difference between it and *ReloKick 1.3* though.

Available from: Online PD, 1 the Cloisters,
Halsall Lane, Formby,
Liverpool L37 3PX. Tel:
01704 834335. Price:
75p plus 75p P+P.

65 %



INTRODUCTION TO WORKBENCH AND AMIGADOS

tutorial



▲ If only there were more disks like this! Introduction to Workbench and AmigaDOS is an absolute must for the beginner.

Wow! Someone should have done something like this ages ago! Well, in fact they did, it was called 'The Very First' and came with the original Amiga 500a. However, this couple of disks are what every beginner needs. Essentially it's a manual, but thanks to the wonders of modern science, it's all been done with AmigaGuide. This package is for everyone who got an Amiga at Christmas, or indeed last Christmas, and wants to learn how to use it properly.

Switch on your Amiga, slot in disk one and what do you get? A real feast of information. It's like having a manual on the screen, but it goes so much further. Everything is presented in an easy-to-use manner, there are very few big, complicated words and if the grammar is off in a few places, well it's still understandable. This is what all

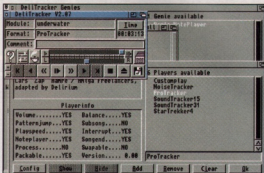
computers should come with, something that allows the computer to teach you how to use it. This kind of thing speeds up a beginner much faster than a manual, and it makes learning more fun. When you've finished reading the text, there are a couple of nice surprises too: the program teaches you what all the Workbench menus do. You simply select a menu item and it tells you all about it. Then the main disk is set up to look just like a normal Workbench disk full of programs, but when you double click on them, up pops some text telling you what that program does.

If you are an Amiga beginner then get this, if you know someone who is a beginner, get it for them.

There should be more disks like this out there. It's all very well creating educational programs for kids, but when it comes to computers it's the adults who need teaching. This is a fine program which will do just that.

Available from: F1 License ware, 31 Wellington Road, Exeter, Devon EX2 9DU. Tel: 0392 493580.
Price: £4.99 including P+P

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▲ Just some of the absolute plethora of options available in Delitracker.

DELITRACKER 2.07

music player

Normally the only kind of music program to make its way into these fabled columns is one which can edit and create music. *Delitracker* only plays it. What's the point? Well, when you're working your way through some tedious chore on your Amiga, have your favourite tune playing in the background.

Delitracker takes playing music a fair bit more seriously than any other player program I have come across. It has options like Fort Knox has gold. For instance, it has its own macro language for controlling the player, the ability to create a playlist, and it's modular in design, allow you to add different music players as time goes on.

At the moment the program supports *Noisetracker*, *Protracker*, *Soundtracker 15*, *Soundtracker 31* and *Startrekker 4*. Not the most comprehensive of players (where's the *OctaMED* player?), but it's quite surprising just how many PD tunes are written using the first two.

This player is for people who take their Amiga music very seriously. It should certainly keep them happy too. It's not small, weighing in at just under 90K, but it has enough features to run an Amiga dance festival.

Available from: Scribble PD, 2 Hillside Cottages, Burstall, Suffolk IP8 3DY. Tel: 0473 652588. Price: £1 plus 75p P+P per order.

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FUNKY UTILITIES #1

utilities

Ah, another month, another utilities disk. Hang on! Didn't I write that last month? Oh well, at least this one is good. The quality of utility disks seems to have made a marked upturn recently. Perhaps the message is getting through that PD libraries need to check the quality of the programs before they put them on disk. This one has a couple of real beauties on it and a few interesting bits on top of that. First up is *AFCopy* 4, a program much like *S/D* or *Directory*



▲ The wonderful *AFcopy*, easy to set up and great to use. Find it on *Funky Utilities*.

Opus. *AFcopy* is really neat. As a freeware utility it's simply outstanding. It's fully configurable, works in an easy to use fashion and, best of all, has excellent documentation. Then there's a nasty

but nice little program called *Lottery!* which has a predictable purpose in life. Yes, it selects numbers for random for you. The nice bit is that the program is very well written and presented. The nasty bit is that if you lose you might be

tempted to blame your computer (just remember it was you who chose to use the numbers).

The padding on this disk comes from *Ring Detect*, a program to check whether a modern line is

ringing; *HD Off*, which shuts down your hard disk when it's inactive (this I must warn you against! It may reduce the life of your drive!); *WB Flash*, which puts rainbow colours into your Workbench; and lastly, a couple of *Intel Outside* icons, a must for every Amiga lover. *AFcopy* is a great program and justifies getting this disk alone. *Lottery!* is the ideal thing for people who can't think up random numbers on their own. If you need either type of program, get this disk.

Available from: Online PD, 1 the Cloisters, Halsall Lane, Formby, Liverpool L37 3PX.

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Art Gallery

With a mighty flourish, Lisa Collins peruses this month's selection of reader art.

Exterminate, exterminate

by Neil Jones, Derbyshire.



This Dalek was rendered in Photoshop 2.0 up an Amiga A1200 with a 500KHz Blizzard 1230/11 turbo-charger and an extra 8MB RAM. Originally rendered in 16-bit 24-bit mode, it was then converted to 256 colours in 16-bit mode.



Finally, the foreground artwork is cut out and overlaid onto the fire background. Some initial effects are added to the bones as a finishing touch. Lovely.



The incredible bulk

by Jason Santos, Luton.

This drawing was done on an A1200 in 16-bit.

Uniwar - get your bangers here

by Anthony Carrendale, North Yorkshire.



▲ From a rough sketch on paper, work began on the foreground images using 16-bit in 32 colours. The skeleton figure and chains were both drawn in black.



▲ An hour later and most of the detail on the skeleton is complete. The skeleton doesn't look very healthy - I wouldn't fancy meeting him up a dark alley.



▲ Here, with most of the foreground complete, work begins on the background. Using the same effect the flames are created. The smooth effect is then used to clean them up a bit.



▲ Some more detail is added. The skeleton is given some heavy artillery to play around with such as bombs and bullets which are drawn in two colours.

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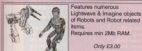
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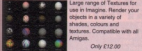
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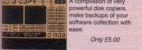
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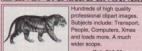
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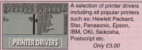
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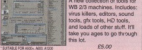
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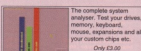
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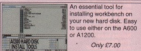
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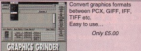
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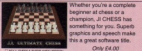
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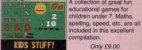
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In the final part of the series our resident audio-visual mix master Tony Horgan lets you in on how he created the Some Justice 94 demo with VideoTracker.

PROCALC 124 ●

Andy Leaning continues his tutorials on the excellent ProCalc – November's *CU Amiga Magazine* coverdisk – by showing you how you can create impressive graphs to display your accounts.

X-CAD DESIGNER 126 ●

André Digard continues his step-by-step guide to X-CAD Designer – December's fantastic coverdisk – by showing you how to create a four-stroke engine and a printed circuit board.

COMMON QUESTIONS 137 ●

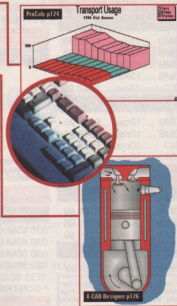
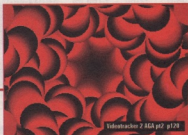
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MASTERCLASS 138 ●

Just got a new Amiga for Christmas? Don't know where to begin? John Kennedy takes a fresh look at your Workbench and operating system for all those new to the Amiga.

TONY HORGAN'S SOUND LAB 140 ●

In part two of his guide to recording demo tapes and masters, Tony Horgan tells you how to smooth out dodgy mixes and get rid of background noise to create ... the perfect mix.



Issue 26

February 1995

The Amiga is still one of the best computers around, and over the following pages you'll see just what your machine is capable of. This month there's an artistic strand running through the tutorials: soundlab involves a walk-through guide on how to create good music demos, as does the Videotracker tutorial. There's 3D drawing with X-CAD, and all you need to know to create nice graphs with ProCalc. As well as all that there's John Kennedy's masterclass, PC conversions, common questions, and a points of view on the portable Amiga. Dive in.

Regulars

Q+A 134

So many letters, so little time. Andy and Tony sit down, scratch their heads and do their best to answer all of your technical queries.

BACKCHAT 142

This is where we take time out from putting the magazine together and listen to you, the readers.

POINTS OF VIEW 146

A portable Amiga? No it can't be possible. Or is it? John Kennedy wonders if this is really something Commodore should be looking at.

Visage



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4

Get yourself connected with a SCSI interface, and enjoy a whole new world of add-ons. Nik Lines shows you how ...



CSI - Standard Computer Systems Interface. Pronounced 'skuzzy'. It's a strange word, but it has been, is and still will be one of the best expansion routes available on any computer.

Put simply, it's a standard by which peripherals can talk to your computer. Most users tend to see SCSI as a way of adding hard drives to a machine, but it can be so much more. There are currently two major interface specifications on the market: SCSI and IDE (intelligent drive electronics). Both have vastly simplified the once-horrible task of setting up hard drives (this used to mean having to type in reams of parameters about the drive before it would work), but technically SCSI is vastly superior to IDE.

In theory, both architectures should allow the connection of more than one drive. With IDE you can have two devices and with SCSI up to seven can be connected to each interface card. However, IDE drives are quirky - they will sometimes refuse to allow connection of a second disk drive, if it's a different make from the first. If you've got a Connor drive, you'll need another Connor drive even if there's a Quantum available at half the price. SCSI has no such

problems. I have never found any incompatibilities between SCSI drives, providing the controller likes the drive!

What's a driver?

"But what's a driver?" you ask. A driver is a computer program that tells the extra hardware what to do. Since the days of Kickstart 1.3, Amigas have been able to boot from hard disks by allowing drivers to be loaded from expansion cards which can take control of the boot sequence. Unfortunately, this is not the case for other devices - but more about that later.

SCSI has the advantage that, as its name suggests, it is standard, one used by many hardware manufacturers. It has been the standard Apple Mac expansion interface for some time, and cards are also available for the PC to drive SCSI hardware. Unix workstations normally rely on SCSI, too. The advantage of this is that there are plenty of SCSI peripherals around that can be used on Amigas, Macs and PCs.

Where do I start?

First of all, you'll need a controller to let you connect SCSI add-ons to your machine.

Commodore only put SCSI as standard on two machines: the A3000 and the near mythical 4000T.

Big box Amiga owners have it easy. Choose a card, take the case off your machine and plug the thing in - the GVP card still does the job nicely even though it's a bit long in the tooth now. A500 owners have a choice again but the most common is the GVP HDB. This plugs into the side expansion port and allows connection of one hard disk and additional external devices. A1200 users can look at the GVP RAM/SCSI expansion card or the recently released Power SCSI-2 add-on for their Viper accelerator boards. The Blizzard card also has such a feature and HiSoft have just announced an

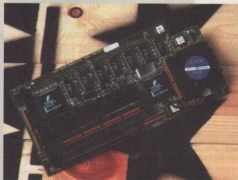
A1200 PCMCIA SCSI card too.

Once you have the board and the drive of your choice, the next part is making them talk to each other. SCSI can support up to seven devices on one controller. Devices are connected together in a daisy chain (in line one after the other), each device having its own unique address number - this is just so that the interface knows which peripheral to talk to. At the end of the chain, a terminator needs to be used to 'stop' signals and complete the SCSI circuit. Consequently, if you are fitting only one device, all you need to do is choose a SCSI address number and check that the termination pack is enabled (check the drive manual for this).

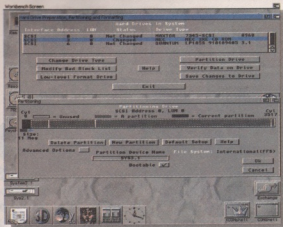
After physically connecting the drive to the interface, it's time to let the Amiga know something about the drive. Here, Commodore gain brownie points for an excellent idea: the RDB system. RDB (short for Rigid Disk Block) means that you can, in theory, take a hard disk from a GVP controller, plug it into a Commodore controller and still be able to read and write to the disk. In my experience, this works well.

The process of setting up your RDB is known as prepping, as you are preparing the drive to have data put on to it. All you need is something that will let you play with RDBs and you're away. All interfaces I have seen come with software to do this for you. If you don't like your interface's software, you're not stuck with it. Commodore's HDTToolBox works with any device (providing you tell it what the device name is) but as it is not given away with all machines, the PD program RDPrep from Microbotics should do the job.

The RDB of a disk contains (amongst other information) the device names of your partitions and their sizes. A quick explanation of partitions may be necessary here: despite the fact that you've only got one hard disk, you can split this into as many different chunks (or partitions) as you like. This is why lots of people have only one drive but many icons on their workbench with exciting names such as 'System', 'Work' and 'Play'.



▲ GVP's G-Force Accelerator is a Zero card for the A4000 and A3000. As a bonus feature, you get a built-in SCSI connector, allowing additional SCSI devices to be used with your Amiga.



▲ Setting up and formatting hard drives is a much simpler affair since the introduction of the SCSI standard.

I normally advocate using two partitions: one for your workbench software, libraries and fonts, and another for everything else. You can of course use as many partitions as you want, and this does in some circumstances speed up access to data, but bear in mind that each partition takes memory. Also, it can be incredibly annoying when you run out of space on your 'Knitting and needle work' partition and are forced to start storing unrelated data on your 'Zen and the art of Home Brewing' partition. In other words, once you have assigned part of your hard drive as a partition, you cannot expand the size of this partition at a later date, even if there is space elsewhere on the hard drive.

Once your partitions have been set up (maybe BMB for Workbench and the rest for your other stuff), you need to format them, as at the moment they're like unused floppies. The Format command on the workbench disk will do this job, but make sure you use the FFS and Quick flags. FFS stands for Fast File System – it speeds up disk access. Quick tells the formatter not to format each individual track (a tedious task) but to just write the information that is necessary to get the disk up and running.

Installing Workbench

Now, installing Workbench is necessary. For versions 2.0 or previous versions, this is simply a case of copying the Extras, Workbench and Fonts disk to the drive. The CLI command Copy will do this for you. Boot from your Workbench disk, run a shell and type 'Copy df0: to dh0: all'. Repeat with the Extras disk and Fonts disk.

Workbench 2.1, 3.0 and 3.1 are slightly more complex: if you want all the features to work, you're best off leaving the task to a program that knows what it's doing. Most interfaces will come with software to do this, but if yours doesn't, First Computer Centre (0113 231 9444) can supply HD-prepping, formatting and installation software at a reasonable cost.

Et Voilá, you're there! You're in the world of cheap, mass-storage devices. With the going rate this side £600 for more than a gigabyte of storage, you've got it made.

A word of warning about SCSI drives,

due to a wider data bus, but SCSI-2 drives can still be used successfully on SCSI interfaces.

Of course, SCSI is not just for hard drives. The world of CD-ROM, tape streamers and all is opened up to you. On the CD-ROM side of things, there is a superb PD driver available called *AmiCDROM* which will allow you to read the majority of CD-ROMs available, be they for Amiga, PC or MAC.

However, being able to read data from a disc and actually running programs are two entirely different things. You can rush out and buy a CD-ROM collection of images in PC GIF format, but the viewing software on the disk is very likely to be for the PC only, so you will need something like ViewTek or FastGif to view them from your Amiga. There are plenty of image viewers in the public domain. For details, contact any of the PD libraries advertised in this magazine.

For test purposes an NEC 3xe triple speed external CD-ROM, available from First Computer Centre (0113 231 9444) was connected to an A3000. Here, different interface cards terminate differently when using a combination of internal and external devices. Luckily the A3000 (as with most others) is pretty sensible and allows the last drive internally and the last drive externally to have termination, so in this case, the drive was connected without any internal fiddling.

Next, *AmiCDROM* was obtained from AmiNET (the Internet collective of Amiga-carrying FTP sites). Installation was a case of copying the drive handler into the L directory of the system disk,

though. Flicking through adverts will show vast differences in price between makes and models, even if they're the same size. Data transfer rates can vary wildly, the current zenith being a sustained 5Mb per second from the Seagate Barracuda series (contact White Knight Technologies 01920 822321). For this sort of speed, you need a serious interface like a Zorro III Fastlane card which in turn requires an A4000 or 3000.

There's also two standards of SCSI interface: SCSI and SCSI-2. SCSI-2 allows faster transfer rates from hard drives

copying the file CD0 into the Devs/dosdrivers drawer of the system disk, and editing the CD0 file to make sure that the correct device name and unit address were being fed into the handler. For the A3000, the device is scsi.device. GVP controllers need the device gvp SCSI device.

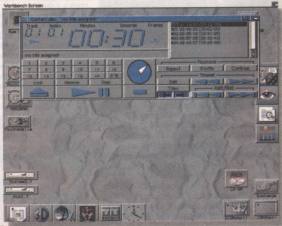
A quick reboot later sees the disk up and running. Sysinfo reported the drive as having a data read rate of 448,232 bytes/second which shows that the triple speed really does make a difference: this drive is fast!

CD-ROMs also allow audio CDs to be played. *Jukebox* is an excellent shareware program allowing you to do this, and it's incredibly easy to set up. Again, you just feed in your device name (scsi.device), and the CD-ROM's SCSI unit number and you have full control of any audio CD.

Blittersoft (01908 220196) have recently announced a new driver for use with AGA Amigas. This will allow you to play CD32 games on your A1200 or 4000 with a SCSI interface. It's priced at £39.99 for everything you need. We'll be reviewing it shortly.

Tape streamers are invaluable if you have data that you just could not afford to lose on your system. Dumping the whole lot to tape and storing this tape in a different place to your computer protects you against most conceivable disasters happening. *BTNTape*, again PD, is a handler for tape drives which allows dumping of files to tape. In the commercial world, *AmiBack* and *Quarterback* both allow you to write to SCSI tape drives when making the backup. An interesting product for tape drive users is a package called *TapeWorm FS* allowing random access to data on a tape as if it were a hard disk. This is no mean feat: by nature, with a tape you have to advance through data until you find the bits you want. This software attempts to fix this and does so pretty successfully.

All in all, a SCSI interface will open up another cheap expansion route to your Amiga allowing you to branch out and be more adventurous with your buying. ■



▲ Jukebox is a shareware program that lets you control and play audio CDs from a SCSI CD-ROM drive.

Videotracker 2.0 AGA

TUTORIAL

PART

In the final part of our VideoTracker 2 AGA series, Tony Horgan takes you through the creation of his own *Some Justice 94* demo.

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This isn't just another shameless plug for my demo, it's also a handy way of explaining how many of the *VideoTracker* effects work in a real situation. This tutorial will make a lot more sense if you have the demo. There's one version for standard A1200s, and another for A4000s and A1200s with accelerators. Each version is available for 75p plus 50p per order for post and packing from Roberta Smith DTP, 108 Falloden Way, Hampstead Garden Suburb, London. Remember to state whether you want the standard or accelerated version.

What follows is a step-by-step guide through the *Some Justice 94* demo, with explanations of all the effects and graphics, and how they interact with each other.

The soundtrack



The backbone of any *VideoTracker* demo is the soundtrack. In this case it was created with *OctaMED*. Urban Shakedown provided a 648K *OctaMED* module. The original mix was a combination of two *OctaMED* modules running simultaneously on two Amigas. Obviously this had to be slimmed down to just one module for use in the demo, a feat which Urban Shakedown achieved without compromising the music. It was also remixed at this stage. A 'TV-speaker friendly' version was considered, as the deep bassline is inaudible through small speakers, but instead it was decided that the trademark sliding sub-bass should stay, as most people into this kind of thing would be listening through a decent stereo anyway. Much of this new mix was made up of breakfast loops and other long samples (such as the vocals), and synth sounds (used for the sub-bass). This presented a slight problem in that to

trigger lots of effects in time with the music, you need lots of samples to cue them from, rather than a few long ones. Also, *VideoTracker* doesn't respond to *OctaMED* synth sounds - it plays them OK, but you can't trigger effects from them. To get around this, quite a few 'cue points' were inserted into the module. These cue points were blank instruments that made no sound, but could still be used to trigger effects. To overcome a bug in the *OctaMED* module player part of *VideoTracker*, all the samples were set up with silent loops at the end. This was to avoid the problem of high-pitched whining that otherwise occurred whenever one of the Amiga's sound channels was vacant. This way, there was always a sample playing on each channel, even if you couldn't hear it. A loop was set up within the *OctaMED* module, from the second-last block to the end of the song. When the end of the module is reached, it jumps back to the second-last block. This was to make the final credits section possible, without the demo quitting or looping back to the start.

The visuals

The graphics came from all over the place. Here's a guide to each visual step of the demo.

Title Screen

It starts off with a simple two-colour IFF picture with the name of the demo. This was created with *DPaint*. No text routines were used in the demo. All the text is made up from IFF pictures or brushes. Making use of the dual-playfield features, the plasma routine was used as a backdrop to the title screen.



Gangster

Next you get a quick flash of the gangster picture. He's a bit nasty looking, and not particularly fitting with the happy huggy theme of the song, but it's a nice bit of artwork to counter the friendliness of the rest of the demo. The reason he appears here is partly to give the forthcoming coppermagnify routine time to read it into its buffer, to avoid the delay that would otherwise occur before the first zoom/rotation part. The image was supplied by Urban Shakedown as an A4 size colour photo-

copy. This was grabbed using an Epson scanner on an Apple Mac. However, please note that it could just as easily have been grabbed with an Amiga scanner, such as those available from Power Computing. It could even have been grabbed from the same Epson scanner directly into the Amiga, using *AdPro*. It was then put onto an MS-DOS format disk, and loaded into *Art Department Professional*. It was scaled down and saved out from *AdPro* as a HAM-6 image.

Jelly Cityscape



The wobbly circular logo featuring cartoon men and towerblocks was originally a four-part grey scale photocopy of an Urban Shakedown record label design. This was scanned into the computer in four colours. *DPaint* was then used to change the shades of grey into black, white, and two shades of red, and also to clean up the rough edges. It was then combined with *VideoTracker*'s wave routine to give it some movement.

Sound And Vision Strobe



Here the gangster HAM-6 brush is put through the coppermagnify 4 AGA routine, while another sample cuts in with the credits for the sound and vision.

Bass Tunnel



Using the same gangster image, the coppermagnify 4 AGA routine is used to generate a tunnel that switches direction with the sliding sub-bass, using routine modes of 160 and 18.

Cyclic Picture Strobes

The next couple of bars are accompanied by some freaky colour patterns and strobes. Two of the pictures were created with *DPaint*'s colour cycling and symmetry features, and then



combined with *VideoTracker*'s wave routine (using a routine mode of 121). The DANCE! screen was also created with *DPaint* in two colours. The black and white strobing effect is automatic, as the colour ranges were set from within *DPaint* when the pictures were saved out. If you don't want your pictures to colour cycle when displayed with *VideoTracker*, you need to cancel all the ranges from within your paint package before you save the picture. Dual playfield effects are used again to combine the images on the same screen. Further strobes and wave routines follow (using routine modes of 120 and 220).

We'll Live As One...

On-screen captions for the vocal "We'll live as one family" we created as IFF brushes. Cue-points were added to the *OctaMED* module to allow them to appear in time as the words are sung. This was necessary as the vocal was just two samples, but there are actually five words. It would have been possible to achieve a similar effect by putting the IFF brush captions in a

sequence with a delay between each, but this wouldn't have led to such tight timing of the graphics to the sound. The wave routine was used once again on the last word to give it a bit of a twist to go with the time-stretched sound.

Running Man



Your fave and mine, the little running man is up next. I'll come clean with this one. He originally came from a full screen animation that in turn came from Stu and Pod of SP Visuals (the vision boys behind London's top chill-out event The Ambient Club). Cheers boys. This was scaled down to a fraction of the size, of the interlaced original (along with the palette saved as a colourset), with a combination of *AdPro* and *DPaint*. Each frame of the animation was scaled, and then the small frames were loaded into *DPaint*. They were then picked up as an animbrush and saved out again. *VideoTracker*'s copperpicture routine is used to display it, with anim loop switched on.

Spinning Bass



The word "BASS!" appears over the little man, and spins around in 3D. *VideoTracker*'s vector routines could have been used here, but in this case it was more efficient to generate the loop as an animation from within *DPaint*. Besides, I didn't know how to use the vector features of *VideoTracker* at this stage! From within *DPaint*, the 'move' requester was used to rotate the word BASS. The running man is handled by the Copper, the demo-creator's favourite Amiga chip, allowing the animation to be laid over the top.

Jungle Remix

A stream of simple effects take us through the next section of drum and bass, including IFF pictures and brushes, and the coppermagnify 4 AGA routine. The Jungle Remix text was created by using a 'fill from brush' option in *DPaint*. The letters of the words were joined together with

JUNGLE REMIX



one-pixel lines, and then it was all filled as one object, using the jungle brush (used later) as a source for the fill pattern.

Bass In Your Face



The 'Bass in your face' strobes are two-colour pictures created in *DPaint*. The fade-out effect makes use of *VideoTracker*'s palette fade routine. It does actually say the whole phrase on the 68020 version, but the word face is doesn't seem to appear on the 68030/040 conversion.

World Tunnel

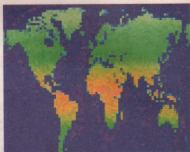
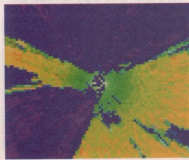
That jungle picture used a few seconds ago is



now put through the coppermagnify 4 AGA routine to create a tunnel to go with the main vocal. Yummy isn't it? The words "We'll ... live ... as ... one ... family" are flashed up in time to the piano chords. The coppermagnify 4 AGA routine is then called a few more times with different routine modes, to make it pump in and out, and change direction. Again, the palettefade routine is used to give the text captions a little more subtlety.

Pink Runner

He's back again by popular demand, and this time he's pink! This is achieved by using a different colourset (palette) in the previous slot. A HAM-6 map of the world is used with the coppermagnify routine to give a 'falling to earth' kind of effect. Following this is an attempt to get as many animations, pictures and effects on screen at once. Try counting them. No, on second thoughts maybe you shouldn't.



World Tunnel

More tunnels? Yes, and this time it's the world map that gets wrapped onto the inside of that never-ending tube. Various routine modes are used during the second vocal section to switch between zooms and different types of tunnel.

Shot its Bolt

By this time the demo has really shot its bolt, and attempts to keep the frantic pace up for just a while longer by throwing everything it's got onto the screen for one final push.

The End!

All that remains now are the two credits screens, both of which are two-colour IFFs created with *DPaint*. If you haven't been sick yet, then the plasma backdrops and blinking strobes should finish you off. ■



▲ **Hint!** Who would have thought you could do all that from this little control panel?

So there you have it

Indeed as it says, there you have it. This demo was not written as an exercise to demonstrate *VideoTracker*'s many features, and as such it leaves many of *VideoTracker*'s stones unturned. However, it should give you a better understanding of how this extremely powerful program can be used. And there we have to leave our *VideoTracker* tutorials I'm afraid. For more information on the finer points of the program, consult the instruction document on the *VideoTracker* disk. If you're not equipped with a modem, why not call the *OctaMED* User BBS on 01703 703446, from where you can obtain plenty of useful *VideoTracker* data, and even the demo featured here.

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ProCalc Tutorial

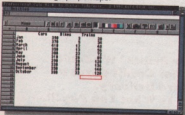
PART 4

Continuing the
tutorial series
on the excel-
lent ProCalc

from our November
issue, Andy Leaning
looks at graphs.

One of the strengths of ProCalc is that in addition to being a very powerful spreadsheet it can also produce impressive 2D and 3D graphs that can be used for presentation purposes. These graphs can also be saved in a variety of formats, so you can incorporate them into other programs and convey information that would otherwise be difficult to explain. But how do you create such graphs?

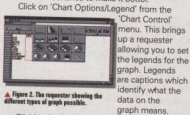
To create graphs we first need some data. So, if you haven't already done it, load up ProCalc, and in cells A2 to A11 enter ten month names (January to October). Across the top in cells B1 to D1 type the names of three elements - types of transport for instance (cars, bikes and trains). Now in cells B2 to D11 enter some numbers. In this spreadsheet represents the number of people using different types of transport each month for ten months. It should look something like that in figure 1. If you're into road building, this kind of data would be quite useful, but displayed like this it's a bit confusing. What we need is a nice, easy to understand version of this data - a graph perhaps.



▲ Figure 1. The raw data from which the graph is created is entered.

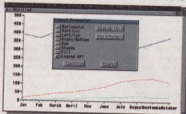
Lo and behold, here comes ProCalc's amazing graphing facility! Firstly highlight cells B2 to D11 and then click on the menu option 'Commands/Create Chart/New Chart'. On screen you'll now see a requester asking you to select the type of graph required - figure 2. These are from left to right, top to bottom: line, bar, scatter, high/low, area, column, volume, pie, 3D column, 3D area, 3D line, pie, dual pie, and pie/volume. Click on the first one - a line

graph. On the next requester that appears, click on 'Continue'. A basic graph will now appear, each column displayed as a line of a different colour, rising and falling to match the numbers previously entered. This is useful but we need to add some flourishes to make it better.



▲ Figure 2. The requester showing the different types of graph possible.

Clicking in the little boxes marked vertical or horizontal on the left of this requester, and then on 'Continue', will display the text entered in cells (B1 to D1) next to a key indicating which graph line represents the data in that column. Clicking on the other boxes in this requester will change how the legend box is displayed - adding a shadow, to the box etc. The names for the legends come from the cells surround-

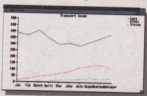


▲ Clicking on the horizontal or vertical tick boxes in this requester will turn on the legends facility. The other tick boxes set the look of the legends box.

ing the actual graph data, you don't need to enter them.

Now click on 'Chart Control/Chart Options/Label' menu. From here you can enter a chart title and two further lines of optional titles, and set the fonts for these. Enter 'Transport Usage' and click on 'Continue'. Your graph should now, all being well, look like that shown in figure 3.

Along with the options covered here you'll also find other settings available under the



● Figure 3: The finished graph. The axis and legend text is taken from the surrounding cells.

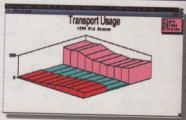
'Chart Control' menu. Some very impressive graphs can be created using combinations of



Project's file formats

The choice in ProCalc is endless and formats are no exception. There are three

formats in the Project menu: IFF which allows you to save charts as IFF files (saved as a bitmaps for use in any other Amiga graphics or paint program - DPaint/Brilliance etc), CAD file format for use with programs like Aegis Draw Plus and Draw format, which saves the file in a mode compatible with GoldDisk ProDraw and Professional Page.



▲ After a little bit of experimentation you'll be creating graphs like this in no time at all!

the available options, and the best way to fully understand the workings of these options is to try them out. I created the graph shown in the screen shot above within a few minutes just by clicking on different options. ■



Take a note Miss Jones

There will probably be times when you need to add some notes to your spreadsheets, possibly a reminder to change the cell in future

or to explain why something has been done. ProCalc has a built in ability to add text notes to cells for just this purpose - almost like little Post-it notes. Click on 'Cell Note/Edit' from the 'Commands' menu. A text cursor appears in the cell contents box the words 'Enter the Cell note' will be shown in the prompt line. Type in a note to yourself and press return.

If you wish to edit the cell note in future select the cell and press Alt-F10 or click on 'Cell Note/Edit' from the 'Commands' menu again. If you want to delete a cell note click on the 'Cell Note/Delete' option under the 'Commands' menu. You can't attach cell notes to empty cells, although you can get around this by entering the apostrophe character into a cell.

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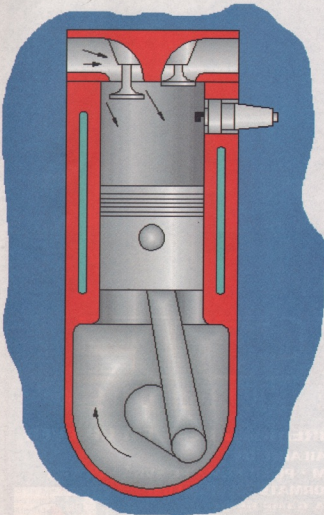
X-CAD Designer

PART

2

The Four Stroke Petrol Engine

After dabbling with isometric 3D last month, our next tutorial sees a return to the more traditional uses of CAD. Here André Digard shows you how to draw a cut away section of a four-stroke motor.



A

lthough it's far from the most accurate diagram, the petrol engine I have drawn here does at least make some concessions towards scale. The engine is roughly 700cc, and although these plans are not intended to produce anything like a real engine, they are intended to give a proper scale representation of how the motor works. If you read through the manual and followed last month's tutorial, you should now have a fairly reasonable repertoire of X-CAD skills. However, reading a book or two on the subject of technical drawing will also help you immensely (unless of course you're already familiar with all of the concepts involved). So bearing these points in mind, it's on with the tutorial.

Before we begin please note that the drawing starts on a standard A3 sheet with a grid of 10mm.

1. The first thing to do is to decide on the bore (diameter of the piston and cylinder) and stroke (distance the piston moves). To make life easy, these are both the same at 60mm. In Figure one, you will see two T shaped objects. These are the distance that the centre of the piston moves and the distance that the crankshaft must move. Notice that there is a 60mm clearance between them. The lines above and below the upper T are the maximum and minimum heights which the piston can achieve. A quick bit of mental calculation should tell you that the piston will also be 60mm in height.
 2. Figure two takes things a little further, the central hub of the crankshaft has been drawn in with a diameter of 30mm and the bottom of the crankcase has been sealed off with two arcs. The outer arc was drawn with a radius of 50mm and the inner arc was drawn by using the arc's parallel option at 5mm. This parallel option produces an arc proportionally bigger or smaller at the distance specified. The easiest way to find out how it works is to use it. Once selected you need to click on the first arc and then somewhere above it (to specify which side you want the new arc).
 3. The next thing to do is to draw in some more of the crankcase. To save time whilst drawing, X-CAD's MI-COPY command was used at a later stage, which means that you only have to draw one side of the crankcase. Figure three shows the start of this process, where a line has been drawn down the centre of the engine so that the various lines can be trimmed.
- Argh! Why don't those arcs trim properly? And that circle? Well, this is one of the less fortunate things about using CAD. Circles and arcs have to be calculated in a certain way. This means that they don't always behave in quite the way you might hope. There is only one simple way around this: delete them and draw them in the way you

Tutorial

would like them. Not an ideal solution, but at least it's easy to do in *XCAD*.

4. Next up was the piston, as shown in Figure four. You could draw it in any position you like, but I would suggest that you stick to what I've done here as it will make more sense later on. The piston is 10mm above its lowest possible position. For this drawing, the piston is in the process of moving down, drawing in fuel as it goes. It was drawn using the **RECT** option from the toolbar and its centre pin is 15mm in diameter. Notice that the centre line has been cleaned away, along with most of the other 'workings' apart from the measurements for the crank.

5. Figure five is the sneaky part. The problem faced was that of drawing the correct position of the crank and the connecting rod (the rod which joins the piston to the crank). To do this, a circle was drawn with a diameter of 80mm, centred around the crank. Then a line was drawn 10mm above the bottom of the circle, remembering that the piston is 10mm from the bottom of its cycle. Then the sneaky bit, a circle with a diameter of 20mm was drawn using the tangent option. This makes the circle just touch whatever entities you click on, in this case the circle and line. This is the kind of thing you will learn how to do if you read a book or two on technical drawing.

6. Figure six shows a close-up of **MI-COPY** (from the toolbar) in action. This was necessary for drawing the correct tangential lines, as shown in Figure seven. The tangential lines were drawn easily enough, just by selecting the tangential option and then clicking on the relevant sides of both circles. Figure seven also reveals that the **MI-COPY** was a waste of time unless you want the connecting rod to appear behind the crank. In this case, it was decided to put the connecting rod in front, so it was all trimmed away.

7. Just to be a bit flashy, I decided that the piston should have some piston rings. These were drawn in with a 2.5mm grid, as shown in Figure eight. While working up close, it was also decided that the inner edge of the crankcase should be filleted. This was done using a 5mm fillet, as shown in Figure nine.

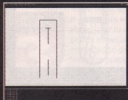
8. Figure ten shows details of an arc drawn to join the two sides of a gap for water cooling. The lines were drawn using the parallel option, which is easy enough to work out how to use. Essentially the first line was drawn 7.5mm away from the outer edge of the casing, with a click on the inside of the line to tell *XCAD* which side to draw the line, and finally two points which are the length of the line. The other line was drawn by repeating this

process with a distance of 12.5mm.

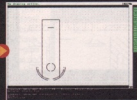
9. Next up was to draw the other side of the casing, which was done using **MI-COPY**, as stated earlier. Note that the window option from the entity menu was used, as in Figure 11. The whole thing was mirrored down the centre-line.

10. Figure 12 shows where the water-cooling gap was made smaller. This was done by moving the arc down and then trimming the lines to it. The reason for doing this was to facilitate the addition of a spark plug. So a gap of 20mm was created, which is also essential for cross hatching, as shown in Figure 13.

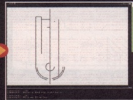
11. Then comes the cross hatching itself. If we were to use the same method as last month, clicking on every corner of the object, this might have taken forever. *XCAD* caters for such complex drawings though, so a 5mm **HATCH** was used with the **CHAINLOC** option from the location menu. Once chainloc had been selected, a simple click on the casing produced the effect shown in Figure 14. The whole casing had been marked for cross hatching. Two things should be noted at this point: firstly that chainloc can be more than a bit fussy about just where you can click and what it will mark; secondly that this is not the end of the command (if return



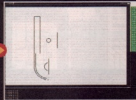
▲ FIGURE 1. The markings of the engine movements drawn in. Only two of these lines will survive.



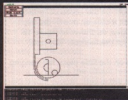
▲ FIGURE 2. The bottom of the crankcase and the hub of the crank drawn in.



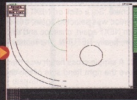
▲ FIGURE 3. A centre line to trim to. Oh, my! What is that trim doing to those curves?



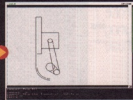
▲ FIGURE 4. That's more like it. And a piston too. It may be to an odd position but it will make sense later.



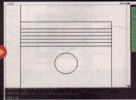
▲ FIGURE 5. The ultra-sneaky method of placing a circle 10mm up into its rotation around the crank.



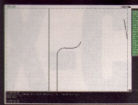
▲ FIGURE 6. A close up of mirror copying that arc, to make sure you get the correct tangential lines.



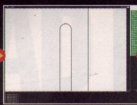
▲ FIGURE 7. All those tangents drawn in. Looks like we'll have to do some trimming though.



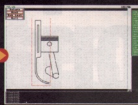
▲ FIGURE 8. Our piston needed some rings so these are drawn in with a 2.5mm grid.



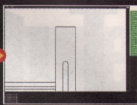
▲ FIGURE 9. The inner edge of the crankcase needed a bit of filleting. A quick bit of filleting and you're away.



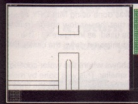
▲ FIGURE 10. An arc is drawn to join these two freshly mirrored lines — the sides of the water cooler.



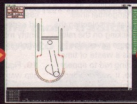
▲ FIGURE 11. Time to fil-COPY the casing. Oh what a time saver! The whole thing is then mirrored.



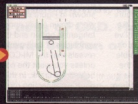
▲ FIGURE 12. That gap for coolant really needs to be made smaller. Oh lets move the arc down.



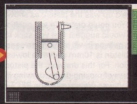
▲ FIGURE 13. And a gap of 20mm is added for a spark plug. This gap is essential for cross hatching.



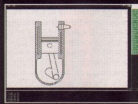
▲ FIGURE 14. Oh, the idiosyncratic wonders of chainloc. Imagine trying to put in all these points by hand!



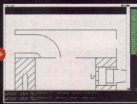
▲ FIGURE 15. Chainloc word again, this time to stop 3-CAD from cross hatching.



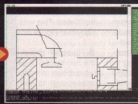
▲ FIGURE 16. The completed casing, including spark plug. Can you spot the likely problem?



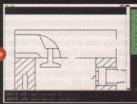
▲ FIGURE 17. The beginnings of the cylinder head. Make sure that the heads are carefully placed.



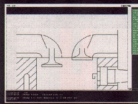
▲ FIGURE 18. The fuel-air inlet being drawn in with a bore diameter of 20mm.



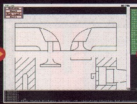
▲ FIGURE 19. The first valve. A little rough and ready at the moment.



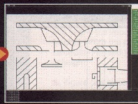
▲ FIGURE 20. That's better. Although this picture is deceptively simple, there have been lots of lines added.



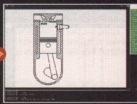
▲ FIGURE 21. The other side is drawn in. I chose to do this using MIRROR again and then modified it slightly. Note the valves have been filleted.



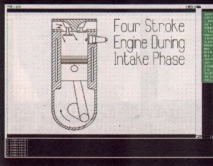
▲ FIGURE 22. The cylinder head is moved away from the casing to make chainloc's life a bit easier. The cross-hatching is starting on the cylinder head.



▲ FIGURE 23. Now with all the cross-hatching done, all that needs to be done is to move the cylinder head back into place.



▲ FIGURE 24. The cylinder head is moved back into place and we have the completed engine. Well almost. A few more tweaks to go.



▲ FIGURE 25. Finally the addition of notes, arrows and text make the whole thing far more informative and complete. What a beauty!

were pressed now the gaps for water cooling would also be cross hatched). So, a click on NEXT (or a press of : on the keyboard) and then chainloc was selected again, this time with a click on one of the gaps. Then NEXT again, chainloc and the other gap, as shown in Figure 15. Then, finally, RETURN. The results speak for themselves. Tidy huh?

12. A simple cross hatch was then done on the little piece left hanging above the right hand side of the casing.

13. The spark plug was the next thing to be drawn in, as shown in Figure 16. If you are particularly observant you may have noticed a problem with the positioning of the spark plug, namely that it would be hit by the piston. This I put down to artistic license, a liquid lunch and a demanding cat. You could modify the drawing to be more accurate should you so wish.

14. The cylinder head was the next thing to be drawn, the start of which is shown in Figure 17. There is an important factor at work here. Each line of the cylinder heads should be carefully placed, with all of its pieces separated so that chainlock will work when using HATCH. This is not easy to explain and unfortunately is best left to trial and error, which in turn will make you cautious about how you draw things in the future, so there are some benefits.

15. Figure 18 shows the fuel inlet being drawn. It has a bore (diameter) of 20mm, so the lines are 20mm apart all the way, which means that the small arc has a radius of 5mm and the large arc 25mm.

16. The inlet valve was added, as shown in Figure 19, in its untrimmed and unfilled form. Figure 20 shows the lines having been trimmed

to fit, though there follows an important announcement: the lines at the bottom and to either side of the valve only go as far as the arcs, similarly the line which extended from the side of the cylinder head to beyond the first arc has been trimmed to that first arc. This is necessary for chainlock to work.

17. Then the other side must be drawn, as in Figure 21. I'll leave it to you to decide how you would like to do this, though the obvious method is to use MI-COPY once again and then modify it a little. Note that the valves have been filled.

18. To make life easier for cross-hatching, the whole cylinder head was lifted away from the casing. This was done using the MOVE command with the window option selected from the location menu. The reasoning behind this was chainlock again, this time a 5mm HATCH was used with an angle of MINUS forty five degrees.

Figures 22 and 23 show this in action.

19. Almost there. The cylinder head was then moved back into place and the engine looks complete at last (Figure 24).

20. To spice things up a little, some text was added and some arrows showing the movement of the crank and the fuel, see Figure 25. The text was created using the rectangle option, and the text was literally entered as follows: "Four Stroke Engine During Intake Phase" (note the double quotes). The arrows were drawn using filled heads with extensions, excepting the curving one by the crank. The latter was done by drawing an arc first and then adding an arrowhead.

That's it! The completed engine. I hope you enjoyed drawing it. If you haven't actually drawn it but just read this tutorial, please do try it. The actual experience you gain by doing the drawing on XCAD is enormous. Next month I'm back with

The engine for paint fans

Just to satisfy the lusty artist in you, here's a really simple guide to the three things you need to do to make the engine into a real pretty picture.

1. Delete all that lovely cross-hatching and make the engine as big as possible on screen, as in Figure 26.
2. Use Plot IFF to get a screen grab.
3. Colour in the screen shot with pretty colours, as in Figure 27.

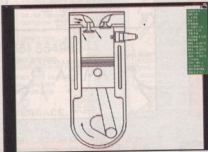


FIGURE 26. The drawing minus cross hatching and expanded to fill the screen, making it all ready for Plot IFF.

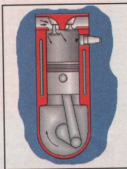


FIGURE 27. In XPaint you can add whatever colours you like. You could do this to create colourful animations or spice up presentations.

The Circuit Board

PART 3

There really seems little point in going into excessive detail about how to draw a circuit board, especially if you have managed to draw the engine from the previous tutorial and the house from the first. So,

instead, here are a few ideas to go with the pictures shown.

Figure 1. Shows a simple circuit which is easy enough to draw. The important factors are that all of the components are created as symbols first. This makes life much easier as you can then place the components first and draw in the actual circuit afterwards. Note that you can also save text in with the symbols, though I don't particularly recommend it as the text can get in the way of the circuit.

Figure 2. Shows the circuit rendered as the board layout proper. This is the kind of diagram which is ideal if you need to or produce final artwork of a project of some sort. The tracks were filled using DRAW POLYGON, which works the same way as cross-hatching. Note that, as with cross-hatching, XCAD limits you to 31 chainlocks. ■

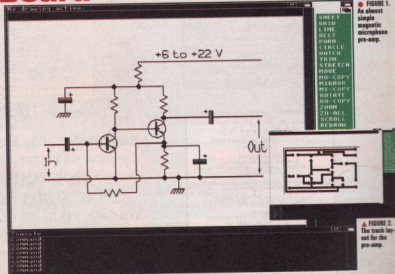


FIGURE 1. An almost simple magnetic microphone pre-amp.

FIGURE 2. The track layout for the pre-amp.

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ANDY LEANING

"And I'm the all-
round expert, go
on try me."

CD QUESTIONS



I have a few questions: 1. Is the CD1200 actually coming out? If so, is it worth getting? 2. Is there any multimedia software out (ie Hutchinson's Encyclopedia etc)?

3. I have an A600, is it worth getting an A1200 with CD, or are Amigas, as my friend says, slow, with naff graphics? 4. My dad wants a PC. He says that Commodore have gone bust and no-one is developing for them. What do you think, an A1200 or a 386?

Derek Gibbons, Crossford, Fife.

1. The official CD1200 is unlikely to see daylight for some time due to the problems facing Commodore at present. However, you could do a lot worse than call Indi (0543 419 999) who sell the pretty good Overdrive CD player for the A1200.

2. Concerning the encyclopedia CD, there were quite a few such titles developed for the CDTV, including the title you mention. Many of these should work on an A1200 with a CD drive.

3. With regard to your friend, he hasn't got a clue what he's talking about! The Amiga is far from slow, and has outstanding graphics - just ask him what kind of graphics you'd get on a PC for the same price! The AGA chipset of the A1200 supports SVGA resolutions, the best most PCs can offer. Show him something like *Guardian* or *Road Kill*, *Mortal Kombat* or some images created in *Photogenics*, *LightWave*, and *ImageFX* - naff graphics indeed!

4. Your dad is not right but not wrong either. Commodore have not gone bust - although they are going through a difficult time. The argument as to which is better, PCs or the Amiga, is an old one, both have advantages and disadvantages. The Amiga is very easy to use, plays outstanding games, and is good for graphics. A PC on the other hand is good for business programs and networking but difficult to use. As it happens we have a feature comparing Macs, PCs and Amigas in this very issue - it's probably worth you both reading it.

MORE MEMORY



I own an A600 with a 1Mb upgrade, an internal 85 Mb hard drive, a Power Computing external drive and a Citizen

1200+ printer. I would like some help on the following questions:

1. How can I install more memory? Is the PCMCIA slot the only way? 2. If it is, where can I get one? I've phoned many companies and they don't seem to stock them any more. 3. Will it make my software run any faster, such as *Final Copy*? 4. I've seen a *Lemmings* hard drive install disk in PD adverts but it says that you need 1Mb Ram and a half Mb of chip memory. On the menu bar at the top of the A600 it says that all memory is graphics memory.

Would I be able to run this disk? AG Smith, Margate, Kent.

Hmmm, a difficult one this. Although the A600 operating system can handle, in theory up to 9Mb of RAM, the expansion slot is 'fixed' so you can, in reality, only add 1Mb of memory. There are however several companies looking at correcting this situation and you can be sure we'll bring you further details as soon as we have them. Having said this, PCMCIA cards will work but they will be slow and are quite expensive. If you could add extra RAM it would improve the performance of your system and speed it up a little. As to *Lemmings*, I haven't seen this disk, so I can't comment on it - if any PD libraries would like to send it in ...

In the September issue of *CU Amiga Magazine* we reviewed and tested six A1200 accelerator/RAM boards. You'll be pleased to know that the *Blizzard 1230-II* came out top in these tests, and is still the fastest A1200 accelerator around. We haven't got space to reprint the results here, but you can get the issue (with the results of our in-depth tests) by calling our back issues department on 0855 468888.

MUSICAL
DPAINT?

Do you know of any software that will allow me to play long sound samples with animations from *DPaint*? At the

moment I use multi-tasking to combine the sound and pictures recording to video, but I find it difficult to sync the two correctly.

David Abraham, Stockport

Your wish is our command! Call

our back issue hotline (0855 468888) and order our November issue - on one of the coverdisks you'll find a program called *VideoTracker*, which allows you, among many other things, to synchronise IFF animations with an *OctaMED* or *ProTracker* music/sound module.

NORWEGIAN
BLIZZARD?

I've got two questions for you. The first one is about an A1200 accelerator called the *Blizzard 1230 II Turbo*. I'm

probably going to buy an accelerator soon and I'm interested in some test results for this one and other competitors. My other question is about subscriptions. Is it possible to subscribe to *CU Amiga Magazine* in Norway? How much would it cost? Stan Kongsvik, Norway.

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MODEM
PROBLEMS

I have a problem getting my modem to work properly. The unit in question is a BT modem, the 4962TXX. It is quite

an old modem which used to be used on a private circuit rented from BT. The software is NComm 3 and the instructions don't seem to include an idiot sheet - they're just reams of difficulty to follow jargon.

The modem appears to be responding but all I get across the screen is a few lines of rapidly appearing and disappearing gobbledigook. The appropriate lights

seem to be showing on the modem but despite trying many different configurations, nothing changes.

Is the modem suitable for this purpose, or is there some particular configuration or standard I should be using? Can you advise me on how to set up the modem and the software? **Jo Kirk, Wores**

This is one of the more common questions we get asked, and also one of the more difficult to answer. Modems are used to connect two or more computers (in this case the Amiga) over telephone lines – they convert the data from the Amiga into squirts of electrical signals that can then be sent down a normal phone line. The problem is that you can transmit or receive this information at different speeds, and with different standards telling the other computer how the information is being sent – for more details read our regular Wired World tutorial in the Workshop section, starting from next issue.

You've probably got NComm set up incorrectly to work with your modem and who ever you're trying to connect with. In NComm go to the Comm menu and set the speed under the baud rate setting to 9600, stop bits to 1, data length to 8-bit, priority none, duplex to full and handshaking to RTS/CTS. Then try dialling 0181 390 1255. This is the number for CIDX – a commercial conference area, although you won't be able to do much here, it will hopefully bring up some instructions that you'll be able to read and prove all is well. If this still doesn't work your modem is probably not a normal one.

ICONS MIX UP

Over many months I've collected a large number of magazine covers for my Amiga 1200, with the usual mix of utilities and games, but now I want to tidy up the collection and sort my favourite utilities on to specific disks then discard the rest. Merely copying drawers from one window to another on a newly formatted disk doesn't work, so how do I do it? Please help, I need the space!

J Stephen Solar, Manchester.

For many programs the icons you can see are only part of the program, with them are data files, libraries, configuration settings and more, but these don't have icons and as such you can't see them. These aren't copied when you copy the icon files – you're only copying the main program. To see these other files, click on the Show/All menu in the

Window menu on your Workbench when a window is open. To copy all the files it's best if you use a directory/file program like Directory Opus – this will display all the files on a disk and allow you to copy them easily. As it happens you'll find DOpus on this month's coverdisk.

CD-ROM CONFUSION



Help! I'm very confused, several of my PC owning friends (deluded as they are) have recently purchased CD-ROM drives and have since been raving about how good CD-ROM software is. I thought CD discs just give more storage space and slightly better sound, have I missed something? It is worth getting a CD-ROM drive for my A1200, I mainly use my Amiga for graphics and enjoying exploring AmigaDOS.

Jack Fowler, Kingston

Your friends are deluded indeed Jack! CD-ROM drives don't add any extra capabilities to a computer. They don't improve the graphics, add 3D texturing capabilities or make systems faster. What they do deliver however is the ability to play CD quality music and allow software authors to include more pictures, sound and bigger programs with their games and applications. What has also happened is that just recently 3D rendering programs have become more affordable, which means more games developers can include long sequences of 3D rendered graphics into games, something which CD-ROM discs with their huge capacity are particularly suited for. CD-ROM programs tend to look and sound better than previous floppy-based games, although in reality they aren't usually any better to play. Should you buy a CD-ROM drive for your A1200? Absolutely, get one now.

There are loads of CD-ROM games appearing and there are even more commercial and PD CD discs coming out, packed with utilities, clipart, sound files and images, you'll love it!

DUFF 1200?



I have recently purchased a second hand A1200 (7 months old) which has a bloody annoying problem. It is unexpanded (2Mb) with an external disk drive and a Star LC10 printer. The thing is, when I try to load some games like Mortal Kombat and Cannon Fodder they either won't load at all or start loading then fade away

and stop loading. After this happens the drive continues to spin. Why is this happening?

David Campbell, Edinburgh.

There could be numerous things at fault here. If other software works fine then it could be a drive alignment fault – this is where the drive heads are slightly out of place and as a result don't load the data from the disk correctly. If you have this problem with all of the software it may be a hardware fault in the A1200 – either way have the A1200 checked out by a local dealer.

600 QUESTIONS

I own an Amiga 600 with 2Mb RAM, and I have some questions for you:

1. Is there a CD-ROM drive for the Amiga 600?
2. I have heard of PCMCIA RAM cards that do not lose their contents when the computer is switched off. Where can I get such cards from?
3. Is Curse of Enchantia hard disk installable?
4. Can I use old A500 peripherals (such as the A530 or Action Replay) with my A600?
5. I have a PD program called Action Replay 1.5. It is supposed to emulate the hardware version, but it won't work with any of my games. I wrote to the PD company but they didn't reply. How do you make it work?

Kevin Thornberry, Lancaster.

Hi Kevin, I'm afraid the first answer is going to be no. At present there are no CD-ROM drives for the A600. Part of the reason for this is that one of the main reasons you'd want a CD-ROM drive is for CD32 compatibility, and as the A600 doesn't have the AGA chipset this would be impossible – so no one has developed a drive for your Amiga.

There are PCMCIA RAM cards that remember their contents when unplugged, but they are very, very expensive. To our knowledge no one sells them in the Amiga market. A500 peripherals that plug into the Parallel, Serial or mouse ports will work, others that use the A500 expansion slots won't unfortunately work on the A600. We'll be looking at this PD version of Action Replay shortly, keep reading the mag.

600 QUESTIONS 2

I have an A600 and have just bought a small 20Mb hard drive for storing a few programs of mine. But I have a problem. I connected it all up

according to the instructions, but there still seems to be no power getting through to the drive (it is an internal 2.5 inch IDE model). I know there is no power because I can't hear anything happening in the drive. The drive is working because I've tested it in my friend's A1200. What do you think?

Lee Arnell, Dorset.

The most likely reason is that your A600 isn't providing enough power for the hard drive, although this shouldn't be the case.

Assuming you've wired it up correctly, take it to your local dealer or whoever sold you the drive, and ask them to test it with your A600. If it doesn't work, it's not suitable for the use you purchased it for, and so you're entitled to a refund.

If it does work you won't have a problem anymore! If it doesn't work give Indit a ring on 0543 419999 and ask them about the SmartStore drive – it's faster than an internal IDE drive.

A570 BARGAIN



I own an A500 with an A40Mb GVP HDB+ hard drive. This obviously goes in the side expansion slot. I recently managed to find an A570 CD-ROM drive at a computer show for £80, and so I snapped it up quickly because I know it has been discontinued and I have been searching for quite a while now without any luck. This fits into the side expansion slot too and now I can only use one of these peripherals at a time. Is there any way that I can connect them together and use them at the same time? If so, where do I get the necessary equipment from?

Philip Redhead, Surrey.

You picked up a bargain there, the A570 for £80 is a steal. Unfortunately, however neither unit has a through port and as such you can't connect both at the same time. This is a real shame because, as you've no doubt realised, it will save you a lot of time if you could copy directly from the CD-ROM drive to the hard drive. Instead you'll have to copy the A570 files to a floppy, then reconnect the HDB+ hard drive and copy the files from the floppy to the HDB+.

Q&A letters

CU Amiga Magazine regret that they cannot reply to every letter in person. CU Amiga Magazine reserves the right to edit your letters and assumes that unless stated otherwise all correspondence is for publication.



Everything you ever wanted to know about ... sound. John Kennedy has the answers.

Frequently Asked Questions

Q What sound support does the Amiga have as standard?

A The Amiga has four channel sound, which means it can play up to four different sounds at once. Most sounds are actually 'samples' of real life sounds, and they are played back with an accuracy of 8-bits (a CD player uses 16-bits).

Q How can I get to hear it?

A There are two phono-style sockets at the back of every Amiga, which can be connected to a hi-fi amp in the same way that you would connect other sound equipment, such as a CD player. Some video monitors have speakers built-in, and it is also possible to buy stand-alone speakers with their own on-board amplifiers. If you are using your Amiga with a television set, the sound is included in the RF signal, so you can hear it through the TV speaker.

Q How can I capture 'real life' sounds for use with the Amiga?

A You'll need some extra hardware, specifically a small cartridge called a 'sampler'. These devices normally connect to the parallel (printer) port and convert sounds into digital format. The sounds can then be saved to disk for later use.

Q Can I add a sound card to my Amiga like a PC?

A You don't really need to! Most PC sound cards don't sound as good as the Amiga's standard sound... Well, OK then to be honest some of the new 16 bit sound cards on the PC are pretty good, but they cost a fortune.

Q But can I add a sound card?

A Not in the same way that you could with a PC. There is no standard for Amiga sound expansion cards and cartridges, so although there are a few options available (SunRize AD516 and Hisoft's Aura to name two), their compatibility with existing music software is usually limited, or non-existent, although the OctaMED-Aura combination is looking promising.

Q But I'm interested in music and I really want to add some more sounds...

A If you need better quality sound, you can either consider looking at MIDI, or instead use one of the 16-bit Amiga samplers available.

Q What is OctaMED?

A OctaMED is a 'tracker' program. It allows you play samples and MIDI instruments simultaneously. Despite its non-musical look, you can create very impressive music.

Q What's MIDI?

A MIDI stands for Musical Instrument Digital Interface, and it's a way of linking together musical equipment such as synthesizers, computers and drum machines. With a computer fitted with a suitable interface (which costs about £20 and fits to the serial port) it's possible to use a program to record, edit and replay music. Programs such as Music-X, Bars and Pipes and even OctaMED can be used for MIDI music sequencing.

Q How does a MIDI interface work?

A The MIDI interface adjusts the Amiga's serial output into the correct format for transmitting to musical instruments. This process requires an adjustment in the voltage/current levels, and also the addition of a thing

called an opto-isolator in the receiving end. A MIDI interface should provide an IN terminal (for receiving information from a music keyboard), an OUT (for sending data to external synthesizers and drum machines) and a THRU (for echoing incoming data back out again). There may be more than one OUT terminal, which will keep transfer speeds high on big set-ups.

Q What sort of MIDI equipment is available for the Amiga?

A There are dozens of 'home keyboards' available. Most have a MIDI interface (which looks like one of the old five-pin DIN sockets) and some have integral amplifiers and speakers. The sounds from these keyboards, can be exceptionally good, but check for features such as the maximum number of sounds which can be played at once (defined as polyphony and multi-tilbrality), and whether drum sounds are also included. If you have more money to spend, it's possible you might want a more professional synthesiser. These are usually available with or without keyboards and all require an external amplifier. As you would expect, the sound quality is much better.

Q Do I need a separate MIDI interface for each instrument?

A No. MIDI operates using 16 channels. Each channel can send and receive information on notes, volume and so on. You can daisy chain the MIDI leads and assign your MIDI instruments to different channels, but if you're using a multi-tilbrality device (that is, one which can play more than one type of sound at a

time) you might eventually use up all 16 channels.

Q Can I add more than one MIDI interface to my Amiga?

A If you have an A2000, A3000 or A4000 you can add a card which provides extra serial cards, and then add another MIDI interface to the new serial card. However, not all music software will be able to support the serial port (MusicX v2 will have a good attempt though). If you use Bars and Pipes, a MIDI interface called 'Triple Play Plus' is available for all Amigas, and it provides three separate 16 channels outputs.

Q Can I link two Amigas together?

A If you run a program such as OctaMED on both machines, it is possible to link them so that they are perfectly in time. You will either need a MIDI link, or connect the machines with a null-modem link (as used to play certain games). By writing half the tune on each machine you can double the number of voices available. This method can also be used to add more MIDI channels.

Q What about 'direct to disk' recording?

A Some 8-bit samplers will record samples directly to disk, which means you don't need to use memory to store samples. This is really a bit of a gimmick more than anything else as far as 8-bit samplers go, but at the other end of the scale, hardware such as the SunRize AD516 sound cards will allow 8 track disk recording - effectively giving your Amiga the capabilities of a multi-thousand pound recording studio. ■



Masterclass

John Kennedy looks afresh at the Workbench and Operating System, especially for those who may have only received their first Amiga.

I'm sure old hands will forgive me if I step back from the more advanced stuff and take a brief look at the Amiga from the point of view of newcomers. In the old days, writing programs for home computers was a relatively straightforward affair. The program knew that it was in total control of the computer hardware, and could do pretty much as it pleased. These days of course, computer systems have become a lot more flexible. With added speed and greater memory capabilities, new ways of working have evolved. One of the most obvious is the 'Graphical User Interface' which removes the unfriendly text-only systems, and instead provides a WIMP or 'Windows, Icons, Menus and Pointer' system.

If you have seen the recent advertisements for the OS/2 operating system you might have thought that IBM have invented something called 'multitasking'—the ability for the computer to run more than one program apparently simultaneously. Of course, as long time Amiga fans will tell you, we've all been multitasking for years very nicely thank you very much.

Multitasking works because the operating system provides an extra layer between the programs running and the hardware. The programs request resources from the OS such as memory, access to the disk drives and windows for displaying text and graphics. The OS allocates the resources and looks after them, to

the extent that every program running can work on the assumption that it a complete computer available—any sharing problems are sorted out automatically.

In theory this sounds very nice, but when would multitasking actually be useful? How many times would you need to run two word processors at once for example? You might be surprised how useful the ability is.

If you are busy running your paint program you can still flip back to the Workbench to copy files or format a disk. If you are running a time consuming program such as a RayTracing package, you can let the Amiga get on with it while you use your desktop publishing package.

Multitasking

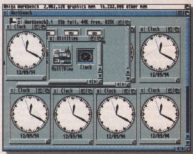
You can demonstrate the ability of the Amiga to do several things at once very easily. Inside the Utilities drawer of your Workbench disk, you'll find the clock program. Double-click it to start, the analogue clock will open a window on the screen and tell you the time.

Unfortunately, unless you have a real-time clock module fitted (A1200's out of the box can't remember the time when you switch them off) the time and will probably be wrong but you can always fix this from the Preferences tools.

When the clock is open and running you can easily get multitasking by double-clicking AGAIN on the clock icon. Low and behold,

another clock will start running. You can drag it away from its position slap-bang over the original and start as many as you like.

While all these clocks are ticking away the moments that make up the dull day, you can open the System drawer and double-click on the Shell icon. This will open a window into which you can type AmigaDOS commands or start programs. In fact, you can open as many of these as you like as well—although by this time you will probably run out of space on your screen. This is what multitasking is all about: lots of utility programs running, multiple Shells open for writing programs, editing files and formatting disks.

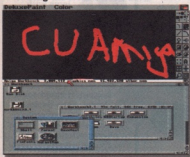


▲ Maybe it's a little overkill, but this screen demonstrates how easily the Amiga's advanced operating system can multitask different programs.

Screen test

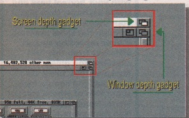
Using a program such as *Deluxe Paint*, you can also discover how the Amiga's unique screen handling makes multitasking even easier. Run the paint program (select a low resolution, small number of colours) image. The normal painting screen will appear. Now the standard Workbench screen is still open in the background (assuming that you booted from Workbench first, and have enough system memory). You can easily flip back to the Workbench screen (and carry out some file maintenance for example) and leave the paint program running. There are three ways to swop screens:

1. Drag the front screen down



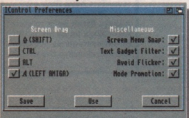
To do this, move the mouse pointer right to the very top of the screen, and hold down the left mouse button. With the button still held down drag the mouse back down the screen. The Workbench screen will appear 'underneath'. This is a quick way of checking on what is happening in the background. If there isn't a screen open, there will be nothing but a black display.

2. Use the screen depth gadgets



Like individual Windows, Screens can have 'depth gadgets'. These are little buttons that will instantly swop the current screen for the one beneath it. Click with the left mouse button in the top right of the screen, and again to flip back.

3. Use the keyboard



There are several keyboard short-cuts for flipping between screens. The easiest is to use the left-Amiga key (the key with the A next to the space

bar) and hold it down while pressing 'M' or 'N' to swop the screens being displayed. You can also use a special key and mouse combination. This combination is defined in the preferences tool called 'Control', under the title Screen Drag.

The default setting is to hold down the left-Amiga key at the same time as pressing the left mouse button and moving the mouse up and down the screen. You can change the left-Amiga key to be Shift, Ctrl or Alt if you require.

Getting started

Multitasking enables all sorts of utilities to run in the background, waiting invisibly until you need them. With the advent of Workbench release 2 and up, Commodore created a standard for this programs called the 'Commodity' system. All commodity programs obey similar rules which makes them easy to keep track of. It also ensures a degree of compatibility by forcing them to share resources.

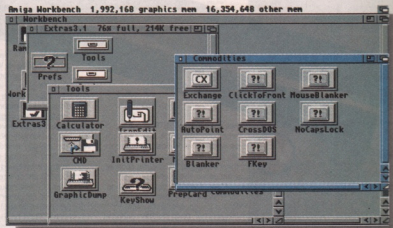
The standard Workbench set-up comes complete with plenty of commodities to get you started. You can always find more on coverdisks,

stored on Bulletin Board systems and in Public Domain libraries. Have a look in the Tools drawer of your Extras Workbench disk.

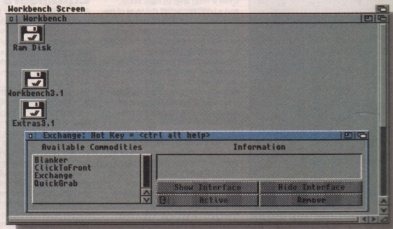
The Commodity Exchange program is a central control program that allows you to keep track of which programs are running. Start it first, and watch as subsequent commodities (including the Commodity Exchange program itself) appear on its list.

As an example, the Blanker commodity will clear the screen and display lots of squiggly lines after a pre-determined time of inactivity. It's supposed to prevent you accidentally leaving a static display on long enough to damage a monitor or television screen.

If you want this program to start automatically, every time you switch on your computer and start Workbench (not play games — these usually ignore Workbench altogether) you should drag the Blanker icon from its drawer and place it in the WBStartup drawer on the Workbench disk. Remember to experiment like this only with copies of the original Workbench, in case things go wrong and you get stuck. ■



▲ The extras disk is full of commodities to make the Amiga even easier to use.



▲ The Commodity Exchange program will help you keep track of what's going on.

The Perfect Mix



PART 2 Murky mixes, EQ and background noise are solved in Tony Horgan's guide to recording professional sounding demo tapes.

to a transistor radio through a cardboard tube.

The place to start EQ control is at your sound source. This will usually be your sample editor, although if you also use MIDI equipment, you may find this has on-board EQ too. If your foundation sounds are solid, then you'll have less of a mess to clean up when you make your recording. Use the filter and boost options on your sample editor to clean up each individual sample. If you've got a bassline

section of the magazine!). The Bass Enhancer is a rack-mount sound processor that takes the bottom end frequencies of the in-coming sound, transposes them down an octave, and combines the results with the original sound. All you do is pass your complete mix through the Bass Enhancer, and feed the output straight to your

Sound System Problems



One of the biggest problems with recording a mix concerns different

sound systems. Although you might come up with a mix that sounds great on your system, when played on a different system, it could sound awful. Tape decks, speakers and amplifiers all have their own characteristics. Until you can afford studio quality monitor speakers and amplifiers, this will be a problem. One of the best ways to check if your mix will sound good on other stereos is to compare it to a new, clearly recorded cassette – one that you're familiar with. Play this cassette through your system with your normal bass and treble settings, then play your own recording through the same system. If your recording sounds different from this first cassette (too quiet, too loud, muffled, tinny etc.) you then should have some idea of where you went wrong in the mix. And remember, if you're recording to cassette tape, what you hear from the speakers is not necessarily what's going onto the tape. Different cassette types and cassette recorders have their own frequency responses. Always listen back to your recordings on as many different systems as possible before releasing them.

recorder and speakers. Watch this space for an in-depth review. For all-round sound improvement, aural exciters are very handy. These can add definition to your music with a range of tricks. Thanks to some extremely clever electronics, they can simultaneously reduce hiss, add top-end sparkle, stoke up the bass end, clear out rubbish from the midrange, and give your music added stereo interest. Examples of these include the 296 Dual Spectral Enhancer (£379) from DBX (tel: 0181 207 505), and the Ultraflex II (£257) from Behringer (tel: 0483 458877).

Equalisers

A cost-effective way of improving your recordings is to add a stereo graphic equaliser. This will give you independent EQ control over the left and right stereo channels of your music. This is useful if the bulk of your sounds are coming from the Amiga's audio outputs. When using four samples at once, the Amiga puts two of them on the left channel, and two on the right channel, leading to a very uncomfortable stereo effect. However, if the two channels are combined (either with a mixer or just a simple merging of leads), a stereo graphic equaliser will allow you to add subtle stereo effects. Slightly different settings on the right and left channels of the EQ will give the impression of certain sounds in the music appearing at different stereo positions. For example, with one of the mid-range fre-

quency pins pushed up on the left channel, and down on the right channel, the mid-range sounds will appear on the left of the stereo field. Subtle use of this technique across the frequency spectrum can lead to a decent stereo mix. ■

Professional

For those with a bit more available dosh, there are professional units that do similar things to the Sound Enhancer, only with a lot more finesse. If your dance tracks seem to be lacking in the deep bass department, you could do worse than consider the Bass Enhancer from SoundLab (no relation to this

reducer and speakers. Watch this space for an in-depth review. For all-round sound improvement, aural exciters are very handy. These can add definition to your music with a range of tricks. Thanks to some extremely clever electronics, they can simultaneously reduce hiss, add top-end sparkle, stoke up the bass end, clear out rubbish from the midrange, and give your music added stereo interest. Examples of these include the 296 Dual Spectral Enhancer (£379) from DBX (tel: 0181 207 505), and the Ultraflex II (£257) from Behringer (tel: 0483 458877).

with a particular sample, then make sure it has some bass in it! Take out as much unwanted fuzz, hiss and hum as possible, and boost the appropriate frequencies with distorting anything (unless of course you actually want some distortion). If you don't have enough cash to for anything more extravagant, the Sound Enhancer from Omega Projects (tel: 0942 682206), priced at £39.95 is highly recommended for improving the Amiga's audio output. It has a fixed level of bass boost, and a knob to control the level of treble boost or cut. The Sound Enhancer is specifically designed for use with the Amiga, and it can make a tremendous difference. The adjustable treble control is handy for crisping up your cymbals and drums, and can also be used as a hiss-reduction tool (when the knob is turned right down) for parts of your music that contain just bass sounds.

Backchat

For some reason we always mention bulging mailbags in the letters page intro, and what do you know, we've just done it again! If you've got something to say, get it on paper, and send it to Backchat, CU Amiga Magazine, 30-32 Farringdon Lane, London EC1R 3AU.

How stupid?

I would like to say how much I enjoyed the December issues of *CU Amiga Magazine*. I'd like to say it but sadly I can't, because I didn't get past the front cover before the mag went hurtling towards the nearest wall at high speed.

Let me explain. Having to splash out just under £4.00 for my usual Amiga mag, means that it's not something that I read once and throw away. Instead I like to keep my Amiga mags all neatly stacked in order for future reference.

This month, however, the coverdisk on your mag tempted me – as well as buy my usual magazine – to fork out the extra four quid and check out your magazine.

Ironically then that it was the coverdisk's fault for the mag's low flight pass over the coffee table. I started with the back cover and picked carefully at the end of the self-staple that holds the discs on.

Immediately a piece of the back cover came off with it, followed shortly by the wording on the spine. Stop! I thought. Let's try a different approach. I quickly turned over and started at the front cover. But oh no

that little bit of sticky tape would not leave the page. I tried and tried until, yes you guessed it, the page left the cover. Stopping once again I moved to the lower piece of tape and got much the same story.

By now ten minutes had passed and the front and back covers looked like a sieve and I still hadn't seen the inside of the mag. I'd had enough. The disks were coming off. With one big pull the disks and half the front cover were finally detached. At this point I threw the mag away in disgust. The story doesn't end there because inside the plastic bag sat the discs fixed together with tape. This, not surprisingly, took half the disc label off.

So, my introduction to CU AMIGA has been a short one. Next month the extra £4.00 will stay firmly in my pocket. And my usual publication with somewhat less sticky tape will take pride of place on top of your rather scruffy one.

However, if you would like to replace my scruffy copy with a nice new one I will gladly swap.

P. Whiteley, Leeds.

We put a lot of work into our front

covers so we don't really want them ripped asunder. Have you ever heard of scissors? These allow you to cut things – like the self-staple on the magazine cover for instance. Take your scissors in hand, put the bottom blade underneath the self-staple, then draw down the top blade. And as if by magic, the disk will become detached from the magazine! Simple really.

Shiny Boxes

I would like to respond to October's Points of View column, entitled *Packaging Blues*. I know that was a long time ago but I live in Australia and it takes a while for the magazine to get here.

In the article Andy Leaning discusses the importance of good-quality packaging and the perils of dull brown boxes. He says that many Amiga developers spend little time and consideration (not to mention money) in designing good looking packaging for their products, and if they did they would sell more. However, in a world where people want good value for their money, expensive packaging only contradicts this.

Do people really think that the costs of the packaging aren't included in the sale price of the goods? Are we really that naive? I should think not. Of course we're paying for the totally useless shiny boxes they come in.

I'll agree that a good package is what first attracts many buyers to a particular product. But when considering the purchase of a product such as a memory expansion and accelerator unit, we shouldn't be influenced in our decision making just because the box is all shiny and new. When considering the cost of these items,

much more thought should be given to the quality and merits of the product. Spending hard earned money on a product that we all know about is what we read on the package is insane. The comment made by Andy Leaning in the closing paragraph of the article "the proverb don't judge a book by its cover doesn't apply here" is ludicrous. Does that mean we should buy the product with the best package and totally ignore the performance and features of the product together. It's fine to say that, but in reality it doesn't work.

Value for money is what drives many purchases of a peripheral for the Amiga, not shiny packaging. So please all you Amiga developers out there, don't waste time and money on expensive packaging. Just provide us with a good product with a price tag to match the product not the packaging.

Mark Cesar, Western Australia.

I think you're missing the point. Both you and Andy want value for money, but what Andy was getting at is that companies should, quite reasonably, be expected to provide good manuals and solid packaging as well as good products. We are paying their wages after all.

Rivers of Babylon

As a loyal A1200 owner I have a few questions. Firstly, as soon as (or if) Commodore manage to become Commodore International, I think that it would be time to make an excellent advertisement for the Amiga A1200 upwards. It should boast the Amiga's power, not just like last year when it had a sad lot playing *Another World*. It should have *Babylon 5* type graphics, showing how powerful the Amiga can be as well as playing wicked demos, games and other software like *Lightwave*, *Wordworth 3.1* or *Final Writer 3*, *Rise of the Robots*, the *Tower Assault* intro, *Aladdin* (maybe *Octamed 5* or *Bars and Pipes Pro*) and other stuff. It should tell the public what *Babylon 5*, *Star Trek The Next Generation*, *SeaQuest*, *Robocop The Series* etc were made with. It should also be

TEAM TALK

With new year's eve over, the team are on the second week of their new year's resolutions. Let's see how they are doing.

ALAN DYKES

After spending most of the latter part of '94 playing *Sim City 2000*, Alan decided that his new year's resolution would be to build a better world full of

love, peace and harmony. However, two weeks in and he's cracked already. *Mortal Kombat II* and *Shadow Fighter* were too much temptation for him and, as we speak he's in the games room running both simultaneously so he can get as much fighting and blood spilling action as possible in one sitting.



LISA COLLINS

Fed up with her hard image being compromised by always being given the cutesy games to review, Lisa decided to start afresh in '95 and only review games with guts,



games with grit, games with iron. So she forced her way into the games room in the middle of Alan's gore game fest. She drank it all in, stepped forward for a closer look and... er fainted. We brought her round by waving a copy of *Marvin's Marvelous Adventures* at her. (Which made her faint again).

said that the Amiga has always been and still is a multitasking computer – one of, if not the first to offer this facility. Decades later, PCs get it and people notice. The public will then realise the true power of the Amiga and not just think that the best it can do is *PacMan* or *Another World*.

Secondly, what is the best music program (at a reasonable price) you can get on the Amiga and is capable of blasting *Notator*, because I want to show our music class in school what the Amiga can do. Why? Because recently in a school music lesson, the teacher said: "Let's play this tune on the computer". "Good I thought, they'll bring in an Amiga 1200 with *OctaMED 5* or *Bars and Pipes Pro* (knowing that lots of music groups have used the Amiga for their music). No! to my surprise, they bought an Atari Falcon! I burst out laughing and promptly received a detention.

Finally, is there any arcade conversions of *Daytona Racing*, *Virtua Racing* or anything similar planned for the CD32? Other games coming out on the Sony Playstation are going to be nearly arcade perfect. If the Amiga can do *Microcosm* so well, why not *Daytona* or something similar with a FMV adaptor. I'm sure it could. I know *Daytona* and *Virtua Racing* are Sega games but *Virtua Racing* is coming out on the Jaguar, why not the Amiga?

Alex Georgiev, London.

Music X is your best bet if you want to show your school mates and teachers a decent, cheap, powerful and easy to use Amiga sequencer. Version 1.1 is available for about £20 if you shop around.

As for conversions of *Daytona* and *Virtua Racing*, no-one has yet announced versions for the Amiga or CD32. *Virtua Racing* is a possibility, but the texture-mapped graphics of *Daytona* would probably never run fast enough on an Amiga, or even a CD32 with an FMV module.

A 'pretend' version of *Daytona* would be possible on the CD32, so you suggest using similar techniques to those in *Microcosm*, but most of the graphics would have to be pre-rendered, and spooled directly off the

CD, reducing the interactivity level.

ProCalc Manual?

I was delighted with the *ProCalc* coverdisk on November's issue but was frustrated to find that there was hardly any information about the program's functions in the magazine. I eagerly awaited the December issue for more details on the program only to find that the 'in depth' look at *ProCalc* amounted to some general information about spreadsheets for people who have never seen a spreadsheet program in their lives.

Why not provide some useful information which will help me use this program in particular, like what the function keys do or how to use the macros. I would even be willing to send away for a manual if this were possible. It seems a shame to provide such an advanced program which then leaves your readers so frustrated with a lack of information. David Fine, Carnaby Street, London.

As we only have limited space in each issue of the magazine, we cannot provide the equivalent of a full manual within the pages of one issue. We are currently running a series of tutorials, which in turn will cover all major aspects and features of the program. When ever possible, we will be including complete manuals with our cover-mounted programs, such as last month's excellent *ComicSeTter*.

They're ripping us off

We CD32 owners are being ripped off. I own both an Amiga A1200 and a CD32. I bought the CD32 as a games console in the hope that there would be truckloads of CD32-specific software coming out for it, and I could gloat over my A1200-owning friends about fast loading graphics and wonderful sound. But has this happened? NO. All that ever seems to happen is that a game comes out for the A1200 and a couple of weeks later it appears for the CD32. You would think that the CD32 version would either be a totally different version of the game or something similar with really special graphics and wonderful sound. But not a chance, all that happens is that exactly the same game is

THE FAR SIDE

By GARY LARSON



Professor Farrington and his controversial theory that dinosaurs were actually the discarded "chicken" bones of giant, elite pterosaurs.

transferred over. What's the point? Come on all you software houses out there, show us what you can do.

Hayley Rodgers, Walthamstow.

The trouble is that the hardware inside the CD32 is very similar to that of the A1200, making straight ports very cheap and easy to do. In many ways, the power of a CD ROM drive is over-rated, as far as what it can do for a game. Sure, it can improve adventure games drastically (no disk swapping, lots of graphics, and real talking characters), but there's really not much a CD ROM drive can do to improve a platform game, or the speed of a flight simulation. Even so, we are still awaiting a CD32 game that makes extensive

use of the 'Chunky to planar' chip, which was supposed to make texture-mapped games possible (such as *Doom*, *TFX* or *Daytona*). The reason we have been given for this, is that the chip is too slow to be used effectively in games, which ironically was the sole purpose of its inclusion in the CD32! Try *Roadkill* for size if you want a really good CD32 game. ■

WRITE TO US NOW!

Send your letters to: Backchat
CU AMIGA, 30-32 Farrington
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*CU AMIGA reserves the right to edit your letters and assumes that unless stated otherwise, all correspondence is for publication.

ANDY LEANING



Handy Andy, as we like to call him, is devoted to transforming the CU Amiga Magazine office into a virtual world. We'd all sit at our virtual desks, drinking

virtual coffee and having the same old virtual arguments about whether *Rise of the Robots* is rubbish or not. In fact we'd all be sat at home, linked together via a headset and the Internet. No more delays on the train in the morning, and you could take in a bit of Richard and Judy whenever you like!

TONY HORGAN



Hello, it's Tony here. My resolution is to get a new photo for this page, because I got my hair cut to a number two six months ago, and I don't look like

this at all now. That's me I thought, my other resolution is to follow my own advice and get a record out. Then I can plug it for months, going on about how I made it and stuff like that. Oh, and to get a spot DJ-ing at Sex Love and Motion, or The Final Frontier, or some other cool club that lets me wear space suits.

HELEN DANBY



The debonair designer glanced up from her work, brushed a strand of auburn hair from her eyes, and revealed that her resolution was to take the CU

Amiga Magazine redesign even further, revolutionising computer magazines as we know them. More she wouldn't say, but the seven copies of *Vogue*, *Elle* and *Cosmopolitan* on her desk are beginning to worry Alan. More about the Danby Effect in next issue's CU Amiga Magazine Fashion pull-out.

JOHN KENNEDY



John would like us to point out that despite this picture, he is not a criminal on the run and living in Brazil, shortly to undergo camouflage plastic surgery. It's just

a holiday snap from Greece that we insist on using every month. As for resolutions, John is forbidding himself to mention the words 'information superhighway'. He'd also like to get a new life, but the man from Maplin said that they don't sell them, and he'd have to quote a part number if he wanted one anyway.



GOLDEN JOYSTICKS AWARDS 1995

EMAP Images honours the greatest achievements of the games industry annually with our glittering Golden Joysticks awards. These prized trophies are honoured by the industry more than any others - because they're the only awards that you, the readers, vote for. And the time has come once again for us to poll our readers. Simply fill in the form below and send it off to: Golden Joysticks 1995, c/o Marketing Department, EMAP Images, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU. Every entrant for the awards is automatically entered into a special prize draw, and the winner walks away with £500 worth of software for his or her machine!

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BEST COMPUTER STRATEGY/SIMULATION

This category covers many several genres, specifically: racing simulations, flight sims and war games. Vote for your favourite of 1994 here.

☐ BEST COMPUTER STRATEGY/SIMULATION:

BEST LICENSED COMPUTER GAME

Which arcade conversion, officially licensed title or movie tie-in appealed to you the most in 1994?

☐ BEST LICENSED COMPUTER GAME:

BEST ORIGINAL COMPUTER GAME

What was your favourite game of the year which DIDN'T rely on an official license?

☐ BEST ORIGINAL COMPUTER GAME:

BEST MULTIMEDIA GAME

The huge storage space of CD-ROM has enabled programmers to create incredible software that just couldn't be done on a normal, floppy disc based machine. Which CD title would you rate as the best of the year?

☐ BEAT MULTIMEDIA GAME:

BEST ADVENTURE GAME

The adventure game market has remained extremely strong over the last year with some very commendable releases for all computers. Choose your favourite here.

☐ BEST ADVENTURE GAME:

BEST ARCADE CONVERSION GAME

Conversions of arcade games are as popular as ever - vote for your favourite of 1994 here.

☐ BEST ARCADE CONVERSION GAME:

COMPUTER GAME OF THE YEAR

Which game overall would you rank as the greatest of 1994?

☐ COMPUTER GAME OF THE YEAR:

SOFTWARE HOUSE OF THE YEAR

One of our most prestigious awards. Which games producer do YOU think has maintained the greatest quality and produced the best games in 1994?

☐ SOFTWARE HOUSE OF THE YEAR:

BEST COMPUTER PROGRAMMER OF THE YEAR

As well as bestowing awards on the software houses and the games themselves, we can't forget some of the most important people in the industry - the people who program the games. Which individual or team do you rate as the best programmer(s) of the year?

☐ BEST COMPUTER PROGRAMMER OF THE YEAR:

BEST AD OF THE YEAR

A decent marketing campaign can be the make or break of a particular game or brand. Which advert in particular stood out for you? It could be a game ad, hardware ad - on TV, radio or in the games magazines.

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FEBRUARY 1995 IN THE SHOPS ON JANUARY 15TH 1995

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The Portable Amiga

**A power
4000? A
laptop
1200?
Would they
really be
worthwhile,
or should
the Amiga
stick to
what it's
best at?
John
Kennedy
speaks out.**



There are three questions you will hear when any group of Amiga owners get together. The first is obvious: "What the hell is going on with the Commodore buyout?" The second question is always followed by much shaking of heads and staring into half-empty beer glasses: "What were the people in charge of Commodore ever thinking about? All they had to do was (insert some common sense here)". The final question is invariably "And what about a portable Amiga?" Well, here's some news for you - I have a portable Amiga right here. In fact I'm typing this into it right now whilst lying in bed.

Of course, you have to use your imagination a bit - it does actually say "Amstrad" on the lid rather than "Commodore" or even "Amiga". And it does have a 280 processor inside it rather than a 68020, and true the graphics are a little well, black and white. The surprise is that it does just about everything I could ever want a portable Amiga to do, and it does it very well.

This portable miracle is called the Amstrad NC200, and it costs about £330 from your local Dixons store. Oddly, not many people seem to have heard of the NC200, which is the successor to the NC100 - itself an almost perfect

copy of a Z88, Uncle Clive's last dabble in consumer electronics. More oddly still, the NC200 came bottom in a recent portable computer round-up published in a leading PC magazine: which only goes to show how wide from the mark those PC people actually are.

OK, so you might want a real Amiga you can carry about. In that case you will also want a nice colour display - at least 640 by 480 and lots of colours. No problem, portable PCs have had these screens for yonks. You will also want a fast processor - no sweat, you can buy an Apple PowerBook with a 68030 or even a 33Mhz 68040 and stick megabytes of RAM in them too. It goes without saying that you'll want a hard drive and floppy disk port, and some form of sound amplifier would be handy. Now, step back and take a look: what have you got?

Too expensive

Now, if you put all the above together your portable Amiga would cost about £2,000, which might be a little steep for some people. Then there's the fact that due to the disk drives and colour screen, the batteries will last about three hours maximum. The colour screen will blur quite a lot when you move the pointer about using the tiny trackball, so playing games will be out too.

Better value for money

And then there's the Amstrad NC200. I'm typing this text on one using a full implementation of *Protext* which is instantly available from the inbuilt ROM based operating system. I'll count the words, spell check it with the internal checker and then press a key to save it into the battery backed memory. There is enough RAM to store several days work, and when that gets full I can slot in a cheap PCMCIA memory card. When I need to transfer the text to my Amiga, the internal floppy disk will save to standard 3.5 inch floppy disks which I can then load via *Cross Dos* into *Protext* on the Amiga.

When I'm out of the office, I can use the internal terminal emulator to dial up and send copy by modem. I've even been able to use the NC200 to explore the Internet, which you have to admit is something pretty clever for something the size of three issues of CU Amiga Magazine.

There are lots of other nice features too - the address book, diary, calculator, internal *Tetris* game and a full *BBC Basic interpreter* (I wrote several games and a program for displaying IFF pictures when I was on holiday in the Greek island - the batteries last for months).

The real keyboard and well-designed firmware make it a doddle to use, and the backlit LCD display ensures it can be used just as easily in a dark room as on a brightly lit beach.

Even if it had *Intuition* and a trackball built in I wouldn't use it any more. For what I need it's perfect - it's a word processor and Comms terminal that I can carry home from work in a rucksack on the back of my bicycle. The chances of *Sim City 2000* appearing on it are remote to say the least, but that's what I have an Amiga on my desk for. For real mobile computing, I've got the next best thing. ■

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